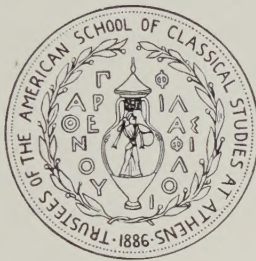


# HESPERIA

JOURNAL OF THE AMERICAN SCHOOL  
OF CLASSICAL STUDIES AT ATHENS

VOLUME II: PART I

1933



HARVARD UNIVERSITY PRESS

CAMBRIDGE, MASSACHUSETTS

1933

*Printed by Adolf Holzhausens Nachfolger, Vienna*  
*Manufactured in Austria*

## THE LOST STATUES OF THE EAST PEDIMENT OF THE PARTHENON

In 1674 a foreign artist, whom for lack of a more convincing identification we call Jacques Carrey, visited Athens and made a drawing of the east pediment of the Parthenon. At that time, out of all the sculpture which had originally adorned the gable there still remained only the wing figures. These were the groups which Lord Elgin was to remove more than a century later and which are now among the chief treasures of the British Museum. The rest of the pediment stood vacant: between the end groups at right and left, which he recorded, Carrey saw a gap of more than forty feet without a single surviving statue, whole or fragmentary.

Quite explicably, this irritating and baffling lacuna soon became one of the most enticing problems in archaeological scholarship. Many generations of investigators have tried to discover the type and character of the vanished statues which had been removed by some unknown earlier fatality before any modern eye had seen them or any competent hand recorded them. Many suggestions were made; but there was no real progress until the Austrian archaeologist Schreiber advanced the brilliant hypothesis that three figures representing Zeus, Athena and Hephaistos on a late-classical altar or well-head in the Madrid archaeological museum (the now famous "Madrid Puteal") had been copied directly from the centre of the Parthenon east pediment. This suggestion won very wide acceptance; but as no further figures were forthcoming, only about one third of the great lacuna had been filled. And even so, controversy soon sprang up. Furtwängler championed a solution inherited from other scholars, whose fundamental difference was the substitution of a single colossal central figure of Athena for the seated Zeus and fleeing Athena of the Madrid puteal,—figures, these last, which Sauer had disposed symmetrically on either side of the pedimental axis. Each controversialist proved his adversary at fault; and both united in annihilating a third theorist, Six of Amsterdam, who had revived Schneider's original suggestion of assigning the true pediment centre to the throned Zeus alone. Although Six had the good fortune to be advocating the correct solution, he had also the bad fortune of committing sufficient minor errors in the presentation of his idea to afford his critics the opportunity for an apparent refutation of his work. Since then, for almost a generation, the question has remained in abeyance, unsolved and seemingly insoluble.

So it is that a rather grim company of great names in archaeological annals—Michaelis, Petersen, Schreiber, Sauer, Six, Furtwängler—arises to overawe the student of to-day



who dares to enter this formidable domain. It is only natural that a newcomer should preface his approach to the problem with a brief explanation of his temerity.

Nine years ago, while studying Greek remains in Spain, I saw for the first time the famous Madrid puteal and was greatly struck by the purity and homogeneity of its style. Like every student, I had long been familiar with Schneider's theory for the throned Zeus, the axe-bearing Hephaistos, and the running Athena; but I had never paid attention to the other three figures of the puteal—a spinning Fate, a Fate drawing lots, and a Fate apparently holding a prophetic scroll or tablet. I was accordingly greatly surprised that these figures seemed to be so completely in the Parthenon style that I could not imagine any other source from which they might have been drawn. After a year's study I printed a brief article in the *American Journal of Archaeology* for 1925, in which I tried to justify the conviction that all of the figures on the puteal were copied from the east pediment of the Parthenon.

Six years later in Athens, in the spring of 1931, a chance opportunity due to the courtesy of M. Balanos and the facility of his great scaffoldings brought me in repeated visits to the actual floor of the east pediment. I had already become much interested in the floor-blocks of the Parthenon pediments in connection with a problem in the west pediment; and there I had gradually acquired the alphabet of a technical language in which I had hitherto had no practice. It was only natural that I should try to apply my new learning to the twelve central floor-blocks which marked the famous lacuna of the east pediment. What I saw was so definite, so conclusive, and so different from what others have suggested, that I have ventured to brave the authority of my predecessors by printing it here in full. And though much of what follows must be extremely tedious and irksome, there is no royal road to this intricate geometry. The prize must be the sole excuse for the effort.<sup>1</sup>

## I.

In 1891 Bruno Sauer, pursuing more extensively a method inherited from Penrose and Michaelis, published careful scale drawings in plan of the marble floor of the now empty east pediment where once statuary stood, and suggested that an accurate reading of the technical evidence should go far toward discovering how the missing figures were once arranged. In due course of time there were even miniature plaster restorations of the pediment sculpture attempted on the basis of Sauer's testimony and the current

<sup>1</sup> I am very grateful to the American Council of Learned Societies for a grant of money sufficient to defray the expenses of draughtsmen for my work. Figs. 2, 5, 16, 25 and the large drawing reproduced in reduced scale on Pl. II were thus provided. I have to thank Dr. Kjellberg and the Stockholm National Museum for Fig. 17, and Dr. Poulsen of the Ny Carlsberg Museum for Fig. 28. Figs. 3 and 8 are reproduced by permission of the publishers, Messrs. Bruckmann of Munich, from their series of *Einzelaufnahmen*.



interpretations thereof. These restorations may be seen in many of the great classical museums and are entirely erroneous.

Sauer's work of forty years ago remains fundamental. If I do not rehearse it here, that is because the *Athenische Mitteilungen* of 1891 and Vol. I of the *Antike Denkmäler* are familiar and accessible to every student of the subject. But in forty years there have been advances in the interpretation of architectural and archaeological evidence which have made it possible and wholly natural to-day to derive considerably more information from these pediment floor-blocks than Sauer sought to do. Yet I cannot do better than follow my predecessor's clear and orderly arrangement of the material, adding under each heading the new observations and developments which bear crucially on the problem.

#### A. AIDS TO SETTING THE STATUES IN PLACE.

##### 1. *Pry-Holes.*

These average 0.06–0.08 m. in length and 0.02–0.03 m. in depth. They were cut in order to give purchase to the levers with which the statues were eased into their final position. Their location and orientation furnish evidence of crucial importance. Though a pry-hole could have been cut in a few minutes, it is obvious that the ancient workmen must have cut each one for a specific purpose. If this purpose cannot be convincingly explained, the restoration is faulty. In every interpretation the following principles must be followed:

*a.* A pry-hole cannot be covered by the statue to which it refers. It may, however, be covered by a statue set in place *after* the one for which the pry-hole was used. At least two of the pry-holes in block 8 were thus covered. Similarly, in the west pediment, statue T covers a pry-hole previously used for setting statue U.

*b.* Near every pry-hole some appropriate face of the relevant statue-block must be located. On the Parthenon pediment floors, wherever the distance between pry-hole and object can be observed and measured to-day,<sup>1</sup> that distance averages 0.08–0.12 m. with notable uniformity. Whenever a statue had to be shifted more than 0.18 m., a second pry-hole<sup>2</sup> was cut in order to complete the task. Therefore in every case the relevant statue should be sought at a distance of 0.08–0.12 m. from the pry-hole. A statue may be located more than 0.20 m. distant from a pry-hole only when there is another nearer pry-hole in line with the statue to show that the statue was shifted twice.

*c.* The direction in which the statue was shifted can usually be derived directly from the shape and orientation of the pry-hole (an observation unfamiliar to Sauer).

From the size of the cuttings we may conclude that the working-end of the levers must have been about 0.06 m. long by 0.01 m. wide. Such a lever could only have

<sup>1</sup> East 6, 8, 13, 18 (tympaon blocks), and 5, 20 (statues); West 3, 4, 6, 8, 10, 11, 18, 20, 22, 23 (tympaon), and 7, 22 (statues).

<sup>2</sup> East 8; West 20 (cf. *Hesperia*, I, p. 19).

been operated at right angles to the slot of the pry-hole into which it was fitted. The opposite walls of the pry-cuttings are sometimes uniform, so that a cross-section would resemble a letter V. In this case it is impossible to tell on which side of the V the workman stood and on which side we may assume the statue. But much more generally the pry-cuttings do not have uniform walls, but show one wall nearly vertical while the other slopes broadly outwards. In such a case we are entitled to infer that the workman stood behind the vertical wall of the pry-hole and that the statue is to be sought behind the sloping wall, since as a matter of observation this rule is invariable whenever the actual position of the statue can be ascertained.<sup>1</sup> It is therefore possible in most instances to affix a small arrow to the pry-holes indicated in the plan of the pediment floor. By convention these arrows will be made to point towards the statue, i.e., in the direction along which the shift occurred. This evidence may seem negligible, but can actually be of decisive importance for a correct solution. Thus Sauer made an impossible suggestion for the statue on block 9, largely because he assumed the pry-hole to refer to the right, whereas it actually was used toward the left.

Since the pry-holes indicate that the awkwardly placed wing-figures of the pediment were the first to be set in position, it must be taken as a general rule that pry-holes in the left wing (if applicable to statues at all, and not to tympanon wall-blocks) were used to shift statues toward the south, in the right wing toward the north. This agrees with the almost unavoidable assumption that the statues were set in regular sequence and that the workmen were in every instance obliged to work from the free space nearer the pediment centre. The central statues were therefore necessarily set last and the corner figures first.

d. With the possible exception of the uncertain example on block 13, no pry-holes for statues are visible on any of the eight central blocks of the east pediment. Similarly, no pry-holes for statues appear on the six central blocks of the west pediment.

Were the statues here too heavy to be pried? Or does the presence of the iron floor-bars explain this peculiarity? The sole surviving large fragment of any of these central statues of the east pediment shows (Fig. 12) deep horizontal cuttings in the back, some distance above the plinth; and these must have been used in lifting and may have been used in lowering and adjusting the statue into place. Did this process take the place of prising with levers? In any case, the criterion of pry-holes applies only to statues near the right and left of the great lacuna (blocks 8, 9, and 18),<sup>2</sup> where it can be made to give some startlingly clear and definite information.

## 2. *Setting Tables* ("Randbänke").

These are slightly raised irregular rectangles left at the final dressing of the floor surface under a statue in order to serve as a sort of pivot on which the statue could

<sup>1</sup> Prof. Stillwell has shown me that this rule is wholly logical on the assumption that the working-end of the lever was hooked or bent down.

<sup>2</sup> The floor-blocks are reproduced and serially numbered in the restoration, Plate II.



be turned for its exact and final orientation in the pediment. As they occur within the area occupied by a statue and generally near one of its rear corners, they help to fix the position and extent of the statue to which they refer.

At most, only two setting-tables occur in the lacuna of the east pediment (on blocks 13 and 18), and the first of these is uncertain and need not be so identified.

On block 13, in addition to the square marking which may be a setting-table, there is a long narrow floor-mark shaped rather like a bar and in most of its extent very slightly raised above the surrounding surface. It overlies the exact axis of the pediment centre, though it is not quite strictly at right angles to the tympanon. This floor-mark has been responsible for a great deal of erroneous reconstruction of the central statuary group. At present it is important to emphasise only that this long, narrow, bar-like marking cannot be a setting-table, since it would not perform the function of a pivot nor be of any help in the shifting and orienting of a superposed statue. This peculiar mark must of course be explained fully and convincingly, and is discussed at length elsewhere in this study.

### 3. *Beddings* ("Leeren").

These are definite outlines of the plinths of statues and occur on blocks 9, 11, 14, 17, and 18. Some are due to deliberate working-down of the marble floor in a final dressing and are therefore true prepared beds, even though they are extremely shallow ones. In other cases the plinth outline is due to erosion by water which has run or dripped down the face of the plinth. In either case the evidence is mandatory: the edge of a statue-plinth must have followed closely inside the sunken line or area.

Again the evidence is more plentiful for the statues farther away from the centre of the pediment. It would seem that the five central floor-blocks have been more rigorously exposed to the weather, inasmuch as the markings here are mere ghostly traces of the earlier state and the original surface is probably nowhere preserved on these blocks. There are no deeply sunken lines or cuttings other than those for iron bars and dowels. In places the markings have become so faint that, even under the most favourable lighting, they seem to float like transparent shadows over the white surface of the scoured and weathered stone. This will explain why it is possible for a record of these central blocks to differ in a few particulars quite definitely from Sauer's publication. In particular on block 15 I have been totally unable to see any traces of the sunken bed which Sauer indicates, and am indeed convinced that it does not now exist. On the other hand, the markings on two pairs of blocks near the extreme left and right of the lacuna (8-9 and 17-18) are so extremely clear, and under proper lighting of early morning or late afternoon are so much more extensive than Sauer recorded, that I have felt it essential to include separate large-scale drawings of them from a new survey by M. Fomine (Figs. 2 and 5).

#### 4. *Tool-Marks.*

These constitute important evidence for the reconstruction of the *west* pediment; but in the central region of the east pediment (blocks 11–16) the entire surface has been so weathered away that no criteria of this sort can be applied. The original tooled surface no longer exists.

The tool-marks on block 8, however, are extremely important. Close to the front edge of the block there is a long smoothly-worked band bounded by more roughly worked areas, which may be taken as indisputable evidence that a statue was set over and along it. For some reason this “anathyrosis” band was not recorded by Sauer, although it is actually so clear that it may be detected on any good photograph. In M. Fomine’s surveys the difference in tooling is clearly distinguished by conventional signs. In this connection it may be admitted that it is sometimes difficult to distinguish a difference of tooling from a difference of exposure to weathering; but no serious misinterpretation results, since the distinction between areas covered by statuary and areas exposed to weather agrees essentially with the distinction between areas more finely dressed to receive statues and undressed areas left around and beyond the statues.

#### B. FASTENINGS.

#### 5. *Anchor-Holes in the Tympanon.*

These do not enter into the problem directly, because the entire tympanon opposite the lacuna has disappeared. On the analogy of the west pediment, however, it is permissible to assume such horizontal fastenings for statues where necessary.

#### 6. *Cuttings for Iron Bars in the Pediment Floor.*

These demand more detailed attention than they have generally received. Except for the passing comment in Dinsmoor’s excellent article on *Structural Iron in Greek Architecture* which appeared in the *American Journal of Archaeology* for 1922, the subject has been almost entirely neglected. From the traces of rust there can be no doubt that the attribution of iron bars to the cuttings is correct and that these bars, wherever actually used, continued back under almost the entire thickness of the tympanon. On blocks 10 and 16 the rust stains continue for 0.35 m. and 0.40 m. beyond and behind the actual statuary shelf of the pediment. The weight of the tympanon wall was thus a counterload, on the cantilever principle, to the statuary weight on the front of the bars.

The bar-cuttings extend to within 0.15–0.20 m. of the front edge of the pediment floor (which is 0.89–0.90 m. wide from tympanon to overhanging front drip). They are a trifle more than 0.05 m. deep and show at the rear, just in front of the tympanon, a little shelf which reduces their depth by 0.01 m. Under the tympanon, the floor-blocks



are not cut out at all, so that the bars either hung free in the true pediment, some 0.05 m. above the bottom of their beddings, or else were bent so as to curve down in front of the tympanon and rest on the little shelf 0.01 m. above the bottom of the beddings. I had always visualised the first of these alternatives as obtaining, until in re-reading Dinsmoor's article on *Structural Iron in Greek Architecture* I noticed that the relieving bars in the epistyles of the Propylaea were bedded with their ends resting on a tiny shelf about 0.02 m. above the rest of the bar-cutting. The bars were thus suspended at only this slight distance above the bottom of the bar-cutting, presumably on the theory that the iron could not be deformed more than 0.02 m. under the pressure of the marble ceiling beam above it. In the cornice of the temple of Castor and Pollux in Akragas the same margin for possible deflection of the iron beam was used. In the east pediment floor of the Parthenon the shelf at the back of the bar-cuttings is about 0.10–0.12 m. in extent, about 0.01 m. higher than the true bottom of the cutting, and does not end with a straight wall at the back but slopes up to the floor level under the tympanon. It is therefore more likely that the bars were forged with a crook or elbow so as to make it possible to insert the rear of the bar under the tympanon and yet to bed the front of the bar on the shelf in the floor-cutting, with the result that the bar was suspended only about 0.01 m. above the bottom of the cutting. In this way it would not have been necessary to cut a deep slot in the statue plinths in order to key them down over the bars, since they would have rested naturally suspended almost in contact with the marble floor.

The purpose of the iron bars was certainly to remove the direct weight of the larger statues from the marble floor which was in reality an overhanging cornice and therefore in danger of snapping under the load. To secure this end, the bars could not be in direct contact with the marble beneath them, since then they would merely tend to concentrate their load on the area of contact, but must hold like cantilevers their load in suspense. Since wrought iron has a tensile strength some forty times that of marble, the use and distribution of these bars was a matter of some moment. We have no right to assume an illogical or unworkmanlike solution of the problem of preventing the central statues from bringing their weight on the overhanging front half of the pediment. The ancient builders may not have been able to calculate the strains and resistances correctly; but they are certain to have shown intelligence and logic in the solution which they adopted.

In the east pediment there were five bars, distributed fairly symmetrically on the seven central floor-blocks. Only one (in block 12) was set at right angles to the tympanon; the other four are distributed in pairs with one member of each pair at approximately equal distances from the central axis. All are set at a very markedly oblique angle to the tympanon. The inner pair converges in the central block of the pediment, so that the forward ends are scarcely more than a foot apart. The outer pair forms much the same convergent angle, but the two bars lie far apart, one in blocks 10–11, the other in block 16. These last were much wider than the three other

bars, to judge from the bed-cuttings<sup>1</sup> which measure 0.26 m. and 0.29 m. in width as opposed to the 0.12 m. of the central pair and the 0.16 m. of the lone straight bar in block 12.

It must be an immediate matter for remark that there is no bar-cutting in block 15. If the purpose was to alleviate the pressure of the great central statues, how is it possible that a stretch of 2.50–2.85 m. so close to the pedimental axis was left without any such provision?

We have not yet discussed the probable thickness of these iron bars. In the west pediment there still exist cuttings in the base of the tympanon which indicate that the bars used in that pediment ranged between 0.06 and 0.12 m. in thickness. In the east pediment we have assumed that the bars were depressed 0.04–0.05 m. below the floor-level; so that, if they were of the same thickness as those in the west pediment, their upper surfaces would have projected a few centimetres above the surrounding floor. Hence the plinths of the statues were probably lightly keyed to fit over the bars, as it does not seem likely that the statues were raised appreciably off the floor. In any case, owing to the elasticity of the iron cantilevers, it would probably have been impossible to shift the statues by prying, once they had brought their weight upon the bars. This factor, quite as much as the greater size of the central statues, may explain the absence of pry-cuttings on the central blocks and make us hesitate to accept as a pry-cutting the break in the surface of block 13, in spite of Sauer's testimony and the extremely appropriate use which the restoration proposed in this study could make of such a pry-hole at just that location.

No reconstruction is correct or complete which does not undertake to explain the peculiar angles at which the bars meet the line of the tympanon. This difficulty has been much ignored, but is just as important as the spacing and distribution of the bars. In general it may be said that previous restorations have attributed (usually quite tacitly!) most illogical ideas and methods to the ancient builders or sculptors who superintended the placing of the statues in the pediment.

#### 7. *Dowel-Holes.*

These are of two completely distinct types:

*a.* The first type occurs only in the right wing, in the neighborhood of the remarkable repair which we shall have occasion to discuss in detail later (cf. pp. 11–12). They are three in number, occur in blocks 18, 20, and 21, and resemble the normal dowel-cuttings used for wall-blocks and members of comparable size in the Parthenon and other Periclean buildings. The cuttings are 0.08–0.10 m. long, 0.02–0.03 m. wide, and *ca.* 0.05 m. deep (except the one in block 20 which is for some obscure reason much shallower). It is noteworthy that they are not oriented parallel with the tympanon but rather

<sup>1</sup> The rust stain behind the cutting in block 10 extends for the full width of the cutting, indicating a bar 0.26 m. wide. In block 16 the rust stains under the tympanon suggest *two* bars 0.14 m. wide, set side by side, but the evidence is unclear.



accurately at right angles to it, as though their function were to prevent the statues from falling or slipping forward over the edge of the pediment. Such dowels do not occur elsewhere in the east pediment nor anywhere at all in the west pediment. They would accordingly seem to be connected with the great repair, which centres on the substitute-block, 19.

*b.* The second type of dowel-cutting is of proper statuary, as opposed to a more strictly architectural, form. The holes are irregular in shape, though usually tending to approximate a square. In general, they increase in size toward the pediment centre, being proportioned to the statues which they were intended to help hold in place.

It has already been remarked that the pry-holes indicate that the wing statues were set first and the central statues last. In agreement with this, dowels in the left wing should mark the north edge of a statue, in the right wing should mark the south edge of a statue, except where the dowels were set in the front or rear face of the statue plinth.

The majority of the statues in the east pediment were not dowelled. If the largest cutting of all (at the south of block 14) is not for dowelling a statue, but for another purpose which will be suggested later (p. 41), it would seem that *none of the statues resting on iron bars was dowelled*. Such a procedure would have been eminently logical, since the function of the iron bars in holding the statue weight off the floor would be precisely contrary to that of dowels tying statue and floor together. Further, our reconstruction will show that the five undoubted dowels of type *b* in the great lacuna all occur in statues in a *running* pose and all but one are located in the unweighted and therefore unstable end of the statue-block. There is, however, nothing in the evidence to force us *a priori* to such an inference.

#### 8. Accessory Fastenings ("Attributlöcher").

On the joint between block 15 and 16 there is a round hole about 0.10 m. deep and 0.05–0.06 m. in diameter. The bottom is roughly picked. This cutting is so different from the dowel-holes just described that it should not be interpreted as a dowel, but as the socket for a round rod, such as a sceptre or spear-shaft.

#### C. SUBSEQUENT ACCRETIONS.

##### 9. Patina.

It is a natural and correct assumption that patina could not form on the pediment floor where this was actually covered by a statue; but it does not seem to have been observed that the peculiar heavy form, resembling an epidermis or crust and ranging in colour from russet to golden brown, does not occur on completely exposed and open surfaces, but only in the immediate vicinity of statuary. It was apparently created by the drip from the statues themselves and not by the mere action of wind and weather on the flat marble floor. (It is possible that the gradual dissolution of the colour on the statues was an effective factor in its formation.) Thus on block 6 such a patina has

gathered heavily in the interval between "Demeter" and "Eileithya" (F and G), but there is no trace of it along the completely exposed surface at the front of the pediment. On block 5 there is a patina of the thickest kind along the outer edge of the bed of "Dionysos" (D), which diminishes in intensity toward the front of the pediment until it entirely disappears near the actual outer edge. In the other wing, where the "Three Sisters" were set, encrusted patina fills the nook between K and L where the overhanging draperies nearly meet, and is plentiful under the projecting right knee of K; but otherwise there is no patina of this sort observable on these blocks. Indeed the 0.25 m. nearest the pediment edge in front of L (block 21) is completely free of patina. Yet wherever the statuary approached the pediment edge (as on blocks 22 and 25 in the right wing and in many portions of the first seven blocks in the left wing) the patina is to be found in this exposed position. The inference is unavoidable that this heaviest type of patina, which resembles a raised crust on the surface of the stone, was formed by some peculiar combination where overhanging statue surfaces were exposed to wind and rain and let fall their drip upon the marble floor beneath.

Incrustation patina therefore becomes an indication of first importance, whose evidence cannot be disregarded. On the schematic plan of the east pediment floor (Plate II) every instance of this type of patina occurring on blocks 6 to 22 has been indicated by a conventional sign resembling lichen growth. Every one of these patches must lie close to an overhanging element of statuary. Any reconstruction which does not conform to this requirement may be immediately dismissed as inaccurate and impossible.

#### 10. *Bronze Stain.*

I have observed only one instance of this in the lacuna: on block 14 the small patch of encrusted patina nearest to the north joint of the block has been stained a copper-green.

#### 11. *Weathering.*

*a.* Marble becomes more deeply corroded along the edge of a superimposed block than where fully exposed in the open.

Thus on block 5 near the pry-hole, the surface is so badly eaten that a shallow trough has formed, as much as 0.01 m. deep and 0.06–0.08 m. wide. The floor-marks are very clear in this region and leave no doubt that statue E ("Persephone"), which was set here, caused this corrosion. There is a similar phenomenon on block 8, where a trough *ca.* 0.08 m. wide and 0.005 m. deep runs east and west between the two central pry-holes. In block 18 the corrosion trough lies under the statue; but here the presence of the large "setting table" was responsible, as the statue failed to sit flush with the floor, and water working in under the hollow of the plinth corroded a line along the slightly elevated platform of the setting table.

*b.* A thin line of drip-holes, little eaten pockets no larger than raindrops, frequently takes the place of the corrosion trough. Here the drapery furrows presumably hung out beyond the plinth and caused water to fall in separate drops, whereas a trough



indicates that a uniform plinth extended beyond the statue. In every case the outermost projection of some statue must be made to agree with such a drip-line.

Clear examples occur at the south of block 17 near the rear; at the south of block 11 near the front, and at the centre near the rear of the same block; and at the middle of block 16 near the front. The very marked line on block 8 just north of the deeply sunken bed for *G* is such a drip-line from the flying drapery above, and not as Sauer would have it "*eine mit dem Spitzeisen fein eingezeichnete Linie.*"

It may even be possible from the spacing and distribution of the drops of such drip-lines to conjecture whether the statue was draped in the masculine or feminine manner. Thus the statue on block 11 may be reasonably interpreted as feminine and as draped in a chiton to the ankles.

*c.* A marked change in color in the marble is indicative of a difference in exposure. Particularly, the area of exposed marble between two consecutive statue-plinths will nearly always betray its position and extent. This criterion is unfortunately not utilisable on the central blocks of the east pediment because, as previously observed, the original surface of the marble has here been completely effaced. On block 18, however, it serves as a useful indication of the limits of two adjoining statues.

#### 12. *Miscellaneous Evidence.*

An interesting architectural study might be made to center upon block 19. It is too little related with the sculptural problems of the pediment to justify more than a brief discussion here.

In a manner unique for the Parthenon, floor-blocks 19, 20, and 21 were barbarously mutilated in ancient times by huge and deep holes rudely cut into their upper faces.<sup>1</sup> On 21 there are two sloping cuttings for lifting-tongs, located symmetrically to the centre of gravity of the block. On 22 there is a similar pair of cuttings; but the rear one has been widened out laterally into a huge incision occupying more than a third of the breadth of the block, while the front one is accompanied by a somewhat smaller hole located between it and the forward edge of the pediment. On 19 there is a well-cut lewis hole in the centre of gravity of the block, a huge slanting incision of much the same shape, size, and position as that at the rear of 22, and a smaller cutting at the front of the block, corresponding to that at the front of 22. In addition, 19 is unique in showing a roughly picked instead of a properly dressed surface and in having no cuttings for clamps or levers, in disagreement with the demands of the neighboring blocks to right and left, which show their halves of the cuttings for clamps. Finally, the light dowels of type "a" (pp. 8-9) occur only on these three blocks and the immediately adjoining one to the left (18); and there are technical indications that

<sup>1</sup> The plan in Plate II shows only the front third of these blocks, the rest of which lay under the tympanon and not under the statues. Cf. Plate I.

both floor-blocks 20 and 21 as well as the tympanon orthostate over them were twice set.

Without venturing a detailed explanation of all the steps employed, it seems safe to assert that the original block 19 had been hopelessly damaged, perhaps after earthquake, and was replaced by an entirely new block, and that both blocks 20 and 21 were lifted from place. All the statuary on these three blocks must in consequence have also been removed and later set back again. Lord Elgin's agents found three out of the four figures which had thus been reset, in their proper place in the pediment. The light dowels of type "a" were apparently not intended as permanent fastenings for the statues, but as temporary protection against displacement, perhaps while resetting the orthostates and cornice. (There is evidence that the replaced statues were more effectively redowelled from behind, a procedure which could not have been carried out if the tympanon had been replaced before the statues.) The size and crudity of the cuttings in the floor-blocks may be connected with an attempt to carry out these repairs with a minimum amount of scaffolding; and the curious perversity of resetting the statues ahead of the tympanon and cornice may be explained by a necessity of conserving all possible working-space. Had the tympanon been reset first, there would have been no storage place for the statues except on scaffolding.

\* \* \* \* \*

Under the preceding twelve headings all the technical principles and types of material evidence have been gathered and discussed. Throughout the rest of this study, reference will constantly be made to these under the symbol "§" followed by letter and number.

## II.

Wholly independent of any considerations derived from the study of the pediment floor, a critical instrument becomes available through a different line of speculation.

The low triangle of a temple gable imposed very specific restrictions upon the ancient sculptor. For one thing, it was physically impossible to run the gamut from a height of next to nothing at all to a stature of more than eleven feet—which is the range through which the sloping cornice of the Parthenon rises above the pediment floor—without making some change of scale in the figures. The Aegina temple had been very successful in keeping a fairly uniform size for its statuary; but that was a relatively small problem. In the pediments of the much larger Zeus temple at Olympia, the size of the figures changes constantly; and in the west pediment of the Parthenon there was practically no attempt at keeping the figures on the same scale.

But though the absolute size of the figures might thus be changed almost at will and indeed might vary almost from figure to figure, the relative proportions within any given figure could not thus be tampered with. The parts of the body must maintain a proper ratio. In short, the canons of proportion remained unchanged, irrespective of the actual dimensions of the statue.

If the further tacit law of "isocephaly" were to be observed, so that no strikingly empty space was permitted between the statues and the sloping cornice above them, certain very interesting conditions were imposed upon the sculptors of the Parthenon pediments.

Normal human proportions fix the depth of a seated figure, from front to back, within the extreme limits of one-half and two thirds of the height. In consequence, the comparatively narrow pediment shelf (0.90 m. or almost exactly three feet wide) was incapable of accommodating a frontally seated figure whose height exceeded two metres. Now the sloping cornice passes at that distance above the floor on reaching block 8, which accordingly becomes the most central available block for a seated figure facing directly out from the tympanon background. But if the statue were turned into profile, so that its greatest width extended parallel with the tympanon, a seated statue could preserve its normal proportions up to a height of 2.60 m. before it would be crowded beyond the width of the pediment shelf. For this reason, block 11 would be the nearest block to the pediment centre on which any form of seated statue could be employed, unless recourse were had to one or more of the following devices:

- a. allowing the statue to jut out into the air beyond the pediment,
- b. slicing away the rear of the statue toward the tympanon, producing a half-round relief,
- c. setting the figure in "relief profile," i.e. with profile legs but with torso twisted frontally to bring the shoulder-breadth parallel with the tympanon.

By means of these devices a throned figure could be produced with any height up to that of the very centre of the pediment. But we must first enquire which of these devices may be justifiably attributed to the sculptors of the Parthenon.

a. It has been freely assumed that the Parthenon statues overhung the floor-cornice. Schwerzek in his plaster reconstructions has liberally abused this privilege. Hauser in his *Die neuattischen Reliefs* (p. 67) wrote that "the arrangement of the plaster casts in the Strassburg museum ... showed that the outermost figures considerably overhang the pedimental frame, the knee of Theseus and the foot of K even to the extent of 0.27 m. ... The central figure might accordingly project as much as 0.40 m." I can see no indication that such was ever the case. Though the statues may have extended to the outermost edge of the drip of the pediment floor, there is no statue in either pediment for which it is necessary to assume that it projected into extrapedimental space, with the sole exception of the heads of the horses of Night—and this was a



daring and brilliant innovation in solution of a most awkward artistic problem. Had the statues been allowed to jut out beyond the pediment, the cantilever force of their weight would have been increased to a degree truly dangerous for the horizontal cornice. And if the central statue had projected beyond this cornice, it would not have been logical for the iron bars which supported it to cease fully 0.15 m. inside of the edge. Finally it is repugnant to our architectural ideas to behold a drip on the raking cornice overhead, crowned by an upturned sima, and yet to discover that these shed their accumulation of rain directly on the heads and bodies of the statues which their framework enclosed and was supposed to protect. It is possible that here and there, by miscalculation, a statue in some portion projected a trifle beyond the strict vertical plane of the pediment; but this must have been so exceptional and so contrary to the general intention that it is not permissible to solve any problem of reconstruction by use of this license.

Appeal has also been made to Carrey's drawings to show that the heads of the statues frequently projected in front of the raking cornice. But it is easy to prove that Carrey was merely careless and inaccurate; for the most glaring instance which he records is the group of Kekrops and his daughter in the west pediment, and these two statues are still in place with their necks far inside the edge of the cornice overhead.<sup>1</sup> In 1749 their heads were still attached to the bodies; and Dalton's drawing of that date correctly shows these heads under, and not in front of, the raking cornice.

b. In spite of the precedent of the Zeus temple at Olympia, it is extremely unlikely that any of the Parthenon statues were sliced off in the rear. It is particularly characteristic of the Parthenon sculptors that they thought and felt plastically to an extent wholly beyond the grasp of the sculptors of the Zeus temple in Olympia. The marvellous rendering of the backs of all the preserved statues argues strongly against so weak a surrender to compositional exigencies which could have been met by perfectly direct methods.

c. It must therefore remain as one of the strongest and most unassailable arguments in favour of the throned Zeus of the Madrid puteal that the god is there shown precisely in the sole pose in which it was possible to set a throned figure in the centre of the Parthenon pediment. The legs are in profile, with the feet ranged one in front of the other, and the body is set almost unnaturally far forward on the seat of the throne in order to give room for the torso to turn into frontal pose with one shoulder back and the other forward in the pediment plane. No ordinary statue would be subject to these peculiar restrictions, for which the great size of the original figure and the extreme narrowness of the shelf on which it was perched are alone responsible.

In summary, we must accept the restriction imposed by the narrowness of the pediment and not permit a seated pose save where it will fit this shelf without projecting beyond it into the air. After the eighth block from the end of either wing we may not assume

<sup>1</sup> Beautifully illustrated in Plate 21 of Hege-Rodenwaldt, *The Acropolis*.

a frontal seated figure, and after the eleventh block we cannot set a seated figure at all except in the peculiar "profile relief" pose.

\* \* \* \* \*

But there is a much more useful form in which the principle of canonic proportions can be pressed into service for our problem. Using the figures of the Parthenon frieze as a basis for measurement, and correcting and amplifying our observations by appeal to other sculpture of undoubted fifth-century Attic tradition, we may construct the following table of proportions (in which "width" is to be understood as the horizontal dimension parallel to the plane of the background and "depth" as the dimension in the line of sight at right angles to the background):

Pose:	Height	Width	Depth
A. Standing:			
1. Full-front .....	1.00	0.30-0.45	0.20-0.35
2. Profile .....	1.00	0.28-0.45	0.30-0.45
3. Relief-profile .....	1.00	0.33-0.50	0.25-0.30
B. Seated:			
1. Full-front .....	1.00	0.45-0.70	0.55-0.65
2. Profile .....	1.00	0.60-0.80	0.35-0.40
3. Relief-profile .....	1.00	0.70-0.80	0.25-0.30
C. Moving:			
1. Running .....	1.00	0.80	0.35-0.45
2. Lunging .....	1.00	0.70-0.90	0.35-0.45

The canon, thus established for an ideal unitary height, will yield the approximate width and depth to be expected for any figure. It is immaterial that these proportions are disputable and variable and that they cannot give mathematically dependable results. The range is taken so liberally that any claim to strict precision in the result is deliberately precluded. Yet, with all this latitude, it will be seen that such general indications are sufficient to give a clue to the type of pose which may be expected in any given position in the pediment if only the size of the statue plinth can be discovered from the floor-marks.

In the east pediment we are interested in the lacuna which extends from the 8th to the 20th floor-block; and here the height between floor and cornice rises from 2.10 m. at the left to 3.43 m. in the exact central axis and descends again to 1.77 m. at the right. It is a simple matter to construct a diagram (Fig. 1) in which the proportions in the preceding table are embodied in such a way that the vertical scale will read statue-height and the horizontal scale statue-width. It will thus be possible to discover at once the presumptive pose of any statue whose position in the pediment is known. For example, if the plinth of a certain statue is known from the indications on the pediment floor to have been 1.40 m. long, and the height of the cornice overhead rises



from 2.10 m. to 2.44 m., we have only to look along the bottom of the diagram for 1.40 and ascend this line to points opposite 1.90 and 2.24 (for we must allow 0.10 m. for the height of the statue plinth and another 0.10 m. for head-room beneath the cornice, and accordingly always read 0.20 m. less than the actual measured cornice height). If we therefore consult the intersections of vertical line 1.40 with horizontal 1.90 and 2.24, we shall find these points lying within the beam of shadow marked

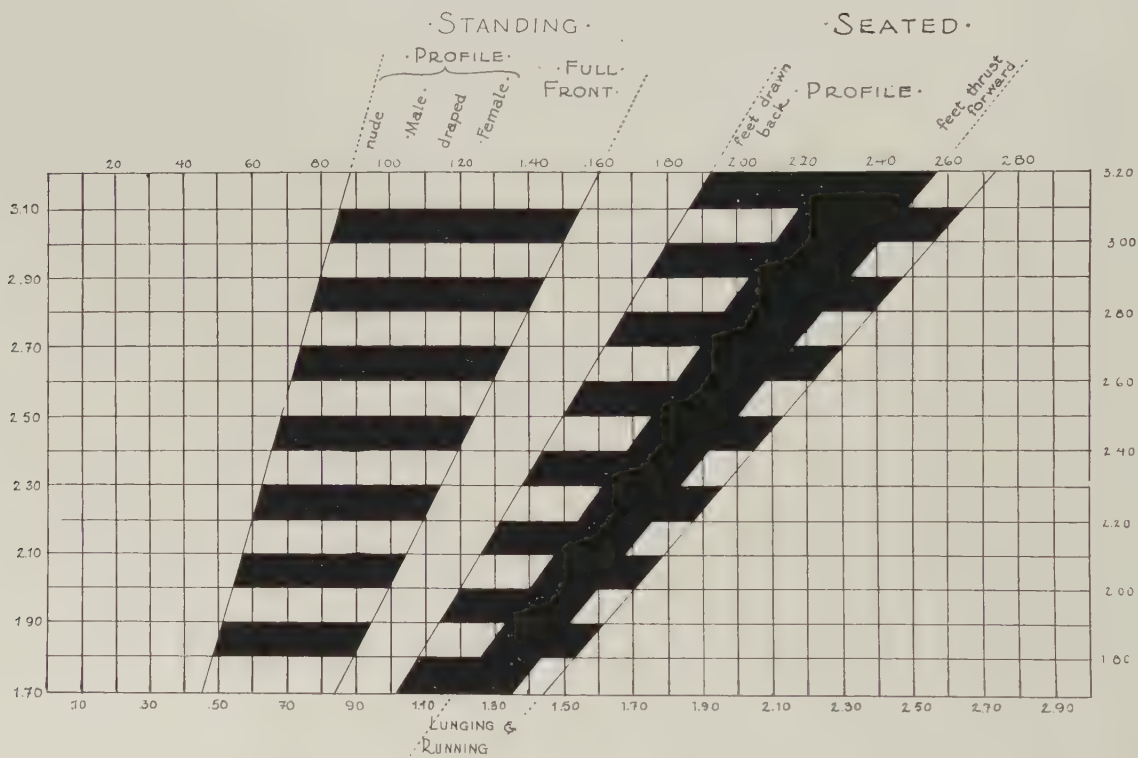


Fig. 1

"Seated Profile" and be quite confident that no simple standing figure could have assumed the proportions needed to fit that particular space.

Wide as may be the range of doubt and error in such a method, it will be reliable enough to tell us whether on any given stretch of floor beneath a cornice at a given height the statue once in place was seated or standing. We may reasonably expect even more precise information, as the legend at the head of the diagram suggests; but here certainty must yield to probability, unless some final confirmation be forthcoming from other sources.

The technical evidence having now been assembled and a method of attack created, it remains to see what the method can make out of the evidence.

## III.

Sauer's interpretation of the technical indications for the missing statuary of the east pediment is epitomised in the following excerpts from his article in the *Athenische Mitteilungen* for 1891:—

“Die Existenz einer Randbank genau in der Giebelmitte beweist zunächst, daß keine einzelne Figur die Mitte einnahm. Daß dann auf den einen Barren nördlich der Mitte eine stehende, auf die beiden südlich der Mitte die schwerere Masse einer sitzenden Figur gehört, bedarf keines Beweises. . . . Figuren von ähnlicher Schwere wie der thronende Zeus, also so gut wie sicher ebenfalls sitzende Figuren müssen auf den sehr breiten Barren in Block 10/11 und 16 gestanden haben. . . . Auf Block 9 findet sich weit vorn ein Stemmloch, das seiner Richtung nach mit der dahinter liegenden Leere nichts zu tun hat, vielmehr notwendig zu einer in dem nordöstlichen Viertel des Blockes aufrecht stehenden Figur zu ziehen ist, hinter welcher jene durch die Leere in 8/9 festgelegte Figur zu einem kleinen Teil verschwand. Entsprechend grenzen im Norden eine ganz vorn liegende Leere in Block 17 und das Stemmloch in Block 18 wiederum etwa ein Viertel, das nordöstliche, von Block 17 für eine schmale, also wiederum aufrechte, weil nach vorn gerückte Figur ab, während die Spuren auf Block 18 noch erkennen lassen, daß die dort stehende Figur auf den leeren Raum zwischen jener und dem Tympanon zu, vielleicht zum Teil in ihn hinein sich erstreckte. Da beiderseits zwischen den so nachgewiesenen schmalen Figuren und der Umgebung der Barren sich kein weiteres Stemmloch findet, so waren diese an den Vorderrand gerückten Figuren wahrscheinlich je aus *einem* Block mit den benachbarten gearbeitet. . . . Für die männliche Figur H. . . . gibt es nur einen in den Maßen völlig passenden Platz, den Block 15. Eine ähnliche zurückweichende Figur mit etwa ebenso breiter Standfläche befand sich links unmittelbar neben Zeus; ein Stück ihrer Leere ist in Block 11 erhalten.”

Sauer's suggestion for filling the lacuna therefore reads from left to right, between the surviving statues G and K, as follows:—

- 1, 2. two standing figures, partly overlapping, carved out of a single block of marble,
3. a large profile-seated figure,
4. a figure “starting back,”
- 5, 6. Zeus and Athena, on either side of the central axis,
7. a male figure (torso H),
8. a large profile-seated figure,
- 9, 10. two crowded standing figures, carved from a single block,
11. a *pendant* to G.

I have no intention of polemicising; but it is only reasonable to state my conviction that all but one of the preceding conclusions can be proved to be erroneous and most of them utterly wide of the mark. Out of all this more or less generally accepted reconstruction of the east pediment, only a single figure (11) can remain exactly as Sauer placed it.

In order to be persuaded of this, it is necessary to begin our critical study at the edges of the gap and not, as Sauer did, at the centre of the pediment.

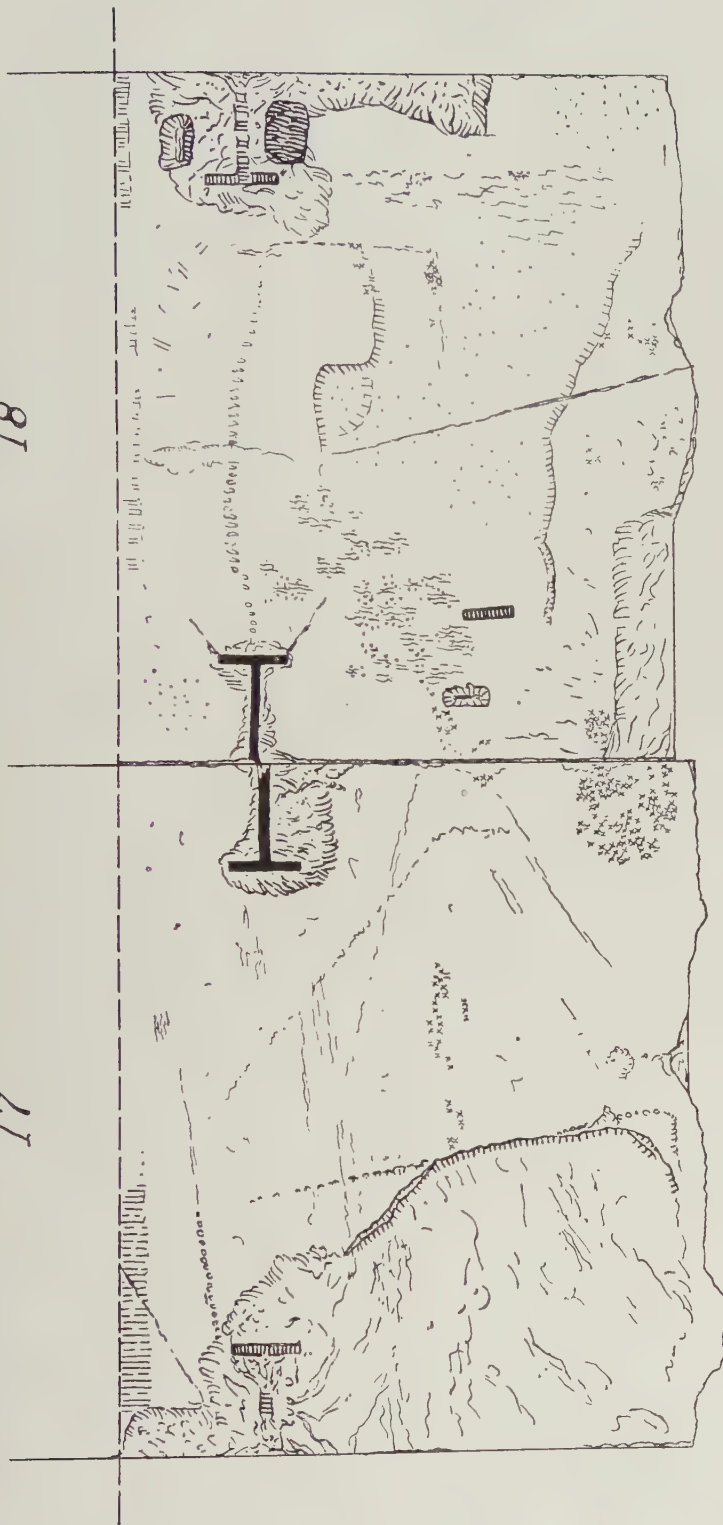


To the left of the "Three Sisters" in the north wing, there has always been postulated a running figure as a counterpart to the "Eileithyia" (G) of the south wing; and it is easy to show that this supposition is probably correct. If we consult M. Fomine's new plan<sup>1</sup> of block 18 (Fig. 2), we shall see in its right rear corner a pry-hole which refers to the tympanon orthostate, and immediately in front of this a dowel-hole for fastening a statue. Dowels in the right wing mark the south end of statues, i.e. the face toward the pediment centre (§ 7b, p. 9), and consequently the statue next to K should end at this dowel. On the same block 18, if we draw a line from the dowel-hole straight to the front edge of the pediment, the area just to the left of this line shows a change of color and weathering in the shape of an irregular strip or band only about 0.08 m. wide. Immediately beyond this band, to the left, there are clear traces of a new statue, including the weather-mark of its front outline and a "setting table" (§ 2) under its rear right-hand corner. We may thus assert with complete confidence that this band or strip marks the exposed area between two consecutive statues. As there is no other change of surface or interruption between this area and the pry-hole dowel at the left edge of block 20, which mark the beginning of K, our statue plinth must have stretched from the dowel in 18 to the pry-hole in 20, a distance of 1.30 m. The cornice heights over this space are 2.07 m. at the left and 1.76 m. at the right. Subtracting 0.10 m. for plinth height and another 0.10 m. for head-room, and referring to the diagram in Fig. 1, we shall find the intersection of horizontal scale 1.30 with vertical scale 1.87 indicates either a running figure or a seated profile figure, while the intersection of 1.30 with 1.56 could be only a running or lunging figure. As we shall immediately see that the statue on block 18 can only be a seated figure facing toward the left, we can hardly set on block 19 another seated figure back to back with it. Hence we can only conclude that the statue on 19 was a running figure, preferably faced toward the right so as to bring the head at the lower level which the table of canonic proportions recommends. This statue will then be dowelled precisely like its counterpart G with a dowel at the unweighted end. In addition, there is a second dowel in block 19, centred 0.83 m. from the first and 0.40 m. from the edge of K; but this dates from the period of repair and may only serve to determine the line of the rear of the plinth. It was probably set from the rear before the tympanon had been replaced (cf. p. 12). Its exact position may be explained by assuming that it marks the centre of gravity of the statue, which in that case would be leaning forward in the same general pose as G. However, there is slightly less space available for our statue than that occupied by G and experiment shows that a draped figure (such as G, in reverse) produces a very crowded effect. Consequently the missing figure is more probably nude or lightly draped, and hence male, and so almost certainly Hermes. In that case, the second dowel becomes intelligible as marking the position of the forward foot.

<sup>1</sup> On Plate I block 18 is the next to the bottom one in the photograph. The statues occupied the left-hand portion of the blocks. All of the details of Fig. 2 can be identified on Plate I.

17

18



- |  |                            |  |                                 |
|--|----------------------------|--|---------------------------------|
|  | <i>Roughly dressed</i>     |  | <i>Cuttings and sinkings</i>    |
|  | <i>Finely " " "</i>        |  | <i>Fractures and weathering</i> |
|  | <i>Raised areas</i>        |  | <i>Patina</i>                   |
|  | <i>Iron still in place</i> |  |                                 |

Y. P.



Fig. 2



The argument is not conclusive, but shows that the traditional notion of a rapidly moving figure next to K, as a more or less exact counterpart to G in the other wing, is presumably correct, because it is almost the only logical possibility, and that the traditional assumption that the figure was Hermes is the most plausible. The final proof can only come after the composition of all the rest of the pediment has been established.

We shall have far more immediate success and certainty with the next figure to the left.

We have seen that this must begin in block 18 beyond the 0.08 m. strip of weathered floor at the left of the dowel for the running figure just discussed, and that the irregular raised rectangle near that dowel is a setting-table under the statue's right rear corner. Just beyond the middle of the next block 17 (Fig. 2) there is the unmistakable edge of the sunken bed of the plinth of a new statue. Shall the whole distance between the setting table in 18 and this bedding in 17 be assigned to a single statue, or shall we, following Sauer, ascribe it to two statues set close together? At the left of block 18 there is a pry-hole referring to the right, and just beyond it in this direction there is a dowel. I imagine that everyone who has worked at this problem has at first assumed that this pry-hole and dowel must mark the edge and termination of a statue, and therefore followed Sauer in dividing our area between two statues. But until this mistake is recognised and corrected, all hope of reconstructing the missing statues of the east pediment is absent. Here is the initial crux in the whole problem.

If there were a second statue, occupying the right half of 17, there should certainly be another pry-hole visible and perhaps another dowel. Sauer saw this difficulty and sought to escape it by the suggestion that both the statues were carved out of a single piece of marble and so possessed a single plinth in common (like E and F, the seated goddesses). But in that case their common plinth would have covered both pry-hole and dowel! Certainly the proper, and indeed the only, way to set a paired group in place would have been to pry it from its extreme left edge; and then the pry-hole and dowel must have been cut near the middle of block 17 and not in 18 at all. But in any event, the plinth of the second statue (on the right half of block 17) must have left some trace of its shape and contour, judging by the extreme sharpness with which the plinths on 18 and on the left half of 17 have left the record of their outline. Instead, there are two patches of heavy patina to warn us that we cannot set a plinth over all this area, but that, equally, it was not entirely empty of statuary. Still further, a statue occupying only the right half of 17 and the small part of 18 to the left of the pry-hole would be only 0.60 m. wide even if it touched both its neighbours, while the cornice height here ranges from 2.26 m. to 2.42 m.; and these are practically impossible proportions for a statue to assume. Finally, the outline of the statue decipherable on block 18 is not really intelligible as that of a standing figure, but very definitely suggests the outline of a rocky seat or throne such as occurs several times for seated figures in the west pediment (e.g. D and U).

Every difficulty vanishes if we make the obvious assumption that there was only a single statue in this position. The outline on block 18 becomes, as we suggested, the mark of the base of a rocky seat, so that we must assume a seated figure facing toward the pediment centre.<sup>1</sup> In that case, the width of the statue can be at most 1.40 m. and the height about 2.00 m. The canonic table in Fig. 1 shows that this is precisely the average normal proportion for a seated profile figure.

But how on this assumption can the pry-hole and dowel be explained, since they fall exactly in the centre of the statue? Nothing could be more logical:

The pry-hole must refer to the throne or rocky seat, whose face must therefore pass close to the dowel. The rear of the rocky seat must run from the outer edge of the "setting-table" (close to the dowel in the rear right corner of block 18) forward in a fairly straight line along the weathered band until it reaches the clearly marked line near the front of the floorblock, where it turns and runs left along this indisputable bedding line. As the outline of the seat near the tympanon is equally definite, the whole periphery of the rocky seat is very exactly fixed. It forms an irregular rectangle about 0.50 m. wide by about 0.70 m. long, its greater dimension being parallel with the tympanon. A figure nearly half again life-size would be able to sit conveniently, though perhaps a trifle compactly, upon such a seat; but its knees and even a portion of its thighs would project beyond, in the direction of the adjoining block 17. The pry-hole demands that the seat be exposed and accessible between the legs of the figure. As the pry-hole is precisely half way between the edge of the seat toward the tympanon and the front edge of the pediment floor, it follows that the left leg of the figure overhung the throne and the left foot was set close to the front edge of the pediment in the open space on block 17, between the area of heavy patina and the bed of the next statue to the left. The right foot must have been placed on the other side of the pry-hole (i.e. between it and the tympanon) and was presumably drawn back as much as the other foot was advanced, since otherwise a sprawling pose would have resulted. There could have been no drapery over the lower legs, since otherwise the stretch of drapery between the ankles would have passed in front of the pry-hole and made it inaccessible. But the heavy accretion of incrustated patina at the front right hand corner of block 17 suggests that there may have been pendent drapery over the left thigh. The advanced left foot and lower leg must have been completely detached in the marble, since otherwise this patina could not have formed under the region of the knee; and this explains why the pry-hole was cut where we find it. Had the whole statue been made out of a single block of stone, it would have had a continuous plinth; but if the projecting leg were made from a separate piece dowelled to the main block (a procedure which can be paralleled among extant fragments<sup>2</sup> from the Parthenon pediments), it would have been mechanically impossible to pry the whole statue over by levering against the isolated and detached

<sup>1</sup> We have passed the boundary for *frontal* seated statues, v. p. 13.

<sup>2</sup> E.g. *Sculptures of the Parthenon*, pl. XIV, Nos. 50, 55, 78, 122, 127.



foot and no workman would for a moment have considered such a procedure. And since the undraped statue made the main block of marble immediately accessible between the legs of the figure, it is there that the lever was applied and there that the dowel was set.

We must try to visualise a little more clearly the drapery arrangement thus implied. Since no drapery extended directly from leg to leg, it follows that an end of drapery

hung inside the extended left leg (near the patina in the middle of the block?), passed over the thigh (above the patina at the front right corner of the block), and so back to the rocky seat, where it presumably formed a convenient covering on which the figure might sit. The other end of drapery should therefore be sought near the tympanon behind the right thigh. It follows almost certainly from this consideration that the figure was nude and male. One thinks instinctively of Apollo in such a connection and it is at least striking that the only material evidence which is a little difficult to explain—the patina streak in the middle of block 17—should perhaps not be ascribed to overhanging drapery, but rather to some large projecting object such as a lyre, whose drip fell free of the actual statue. However, the identification of the statue is mere speculation, whereas its pose and its sex are very definite inference from evidence which admits of no other interpretation. Fig. 3, which reproduces one of two similar statues of Apollo in the Ludovisi Collection of the National Museum in Rome, visualises the



Fig. 3

type of statue which will satisfy the floor-marks and the technical conditions. It has been photographed as though from the pediment centre rather than from the spectator's point of view. Pediment floor and statue plinth have been inextricably fused in this copy; but it is easy to see where pry-hole and dowel must have been and why the rock between the feet of the statue was chosen as the *point d'appui* for shifting the block of marble into place and fastening it there.

To return to our pediment, the next statue to the left of this seated "Apollo" begins with a very clear indication of the outline of its plinth—a rectangle set at a slight angle to the line of the tympanon. So regular a shape suggests immediately a fully draped

and therefore feminine standing statue or else a carefully wrought throne for a seated figure. But this second hypothesis is unacceptable because we should then have to restore a sequence of two seated figures, both facing toward the pediment centre, the second one a fifth larger in scale than the first. A series of throned deities may do excellently for a frieze of uniform height, but it is an impossible device for a pediment, where the only hope of securing an illusion of logical scale is to set a standing figure next to a seated one as the cornice height increases. Actually, such a seated statue with a height of 2.40 m. would have a plinth length of 1.50–1.80 m., so that it would cover the whole of block 16. Yet even this very considerable span would fail to bring the main weight of the statue on the great iron bar, whose cutting is the most conspicuous feature of block 16 (Plate I). And obviously the main weight of a throned figure is on the throne; and the iron bar, in order to be effective, should have been placed at the joint between blocks 16 and 17 and had no reason for being set at a sloping angle to the tympanon. If the figure turned itself on its throne so as to face more frontally, in good Pheidian tradition, the slight shift in ponderation would demand an iron bar set at exactly the opposite slope to that of the actual floor-cutting. There is thus no way to reconcile the technical evidence. Both on mechanical and artistic grounds we must reject any solution which sets a seated figure in this place.

On the other hand, a standing statue here would be about 2.30 m. in height and, if fully draped, would occupy a space about 0.90–1 m. wide (Fig. 1) and perhaps 0.70 m. deep. The latter dimension agrees with the floor-marks, where the distance from the front edge of the plinth bed to the drapery drip-line near the tympanon is 0.73 m. A width of 0.90 m. would bring the left edge of the plinth on a line which would practically bisect the iron bar, so that the suggestion would be obvious that the function of the bar was *to take part of the weight of each of a pair of adjoining statues*. Its remarkable width and its peculiar orientation would thus be explained in a perfectly logical fashion.<sup>1</sup>

On this assumption, the next statue to the left of this must also have been a standing figure, resting part of its weight on the left forward corner of the same iron floor-bar<sup>2</sup> and extending 0.90–1 m., or just over the joint into block 15. Here at the rear of the joint between blocks 15 and 16 there is a round hole in the floor, which does not seem to be a dowel but rather a socket for a sceptre or spear. Between this socket and the iron bar, not far from the front edge of the pediment, there is a small patch of incrustated patina, proving that the statue did not stand on a uniform rectangular plinth like the preceding figure. The evidence thus combines to indicate a nude or lightly draped male figure standing in profile or three-quarter view with the weight on the left

<sup>1</sup> It has already been remarked (p. 8. n. 1) that the rust stains seem to indicate *two* bars side by side in the cutting. These may have been substituted for a single bar when it was noticed that one of them did not have to be as long as the other, because one of the statues lay nearer the tympanon. Certainly, it is difficult to explain why two bars should have been used if a single statue covered block 16, as is usually taken for granted.

<sup>2</sup> Or on the other floor-bar of the pair.



leg and with the left foot on the forward corner of the iron floor-bar, while the right arm, near the tympanon, was raised and held a sceptre, spear, or trident.

There is a torso (H) from the east pediment which conforms exactly with these requirements and derives from a statue whose original height must have been about 2.45 m. As this is within 0.05 m. of the ideal height for a statue on the left half of block 16 (where the mean cornice-height measures 2.70 m.), we should have no hesitation in identifying torso H with the statue which once occupied this post, were it not that there are a number of presuppositions about torso H which must be cleared away. Many commentators, beginning with the original discoverer of the torso, Ross, exactly a century ago, have interpreted the fragment as part of a nude Hephaistos with arms



Fig. 1

raised overhead as though recoiling from the blow which delivered the skull of Zeus from its parturient throes. Unless the raised axe be allowed a very considerable space, the torso is too small for the position in the left wing, behind the throne of Zeus; while even if the vertical height to the cornice be filled with the swinging axe, the figure remains diminutive, being smaller than the Fates whom we shall have occasion to set here. Hence the torso cannot be interpreted as Hephaistos behind the throne of Zeus, and hence the authority of the Madrid puteal with its different tradition of a striding Hephaistos remains unassailed. But in that case torso H cannot be part of a figure wielding an axe, as may also be inferred by considering that if the Athena of the puteal be set on block 15 (as we shall in due course see that it must) the torso must be moved along to block 16, where there is not sufficient cornice height to allow room for the lifted axe.

Careful examination of the torso shows that the muscular indications at the waist demand a markedly uneven distribution of the weight, so that the axis of the torso is not vertical and the left shoulder is held considerably lower than the right. The analogy of the "Hellenistic Ruler" in the National Museum in Rome suggests that the more steeply raised right arm held a spear or staff, while the left was crooked at the elbow

with the hand on the gluteus or thigh. Thus torso H has nothing to do with Hephaistos and swings no axe overhead. Its size indicates a position in the pediment precisely where the floor-marks require such a figure.

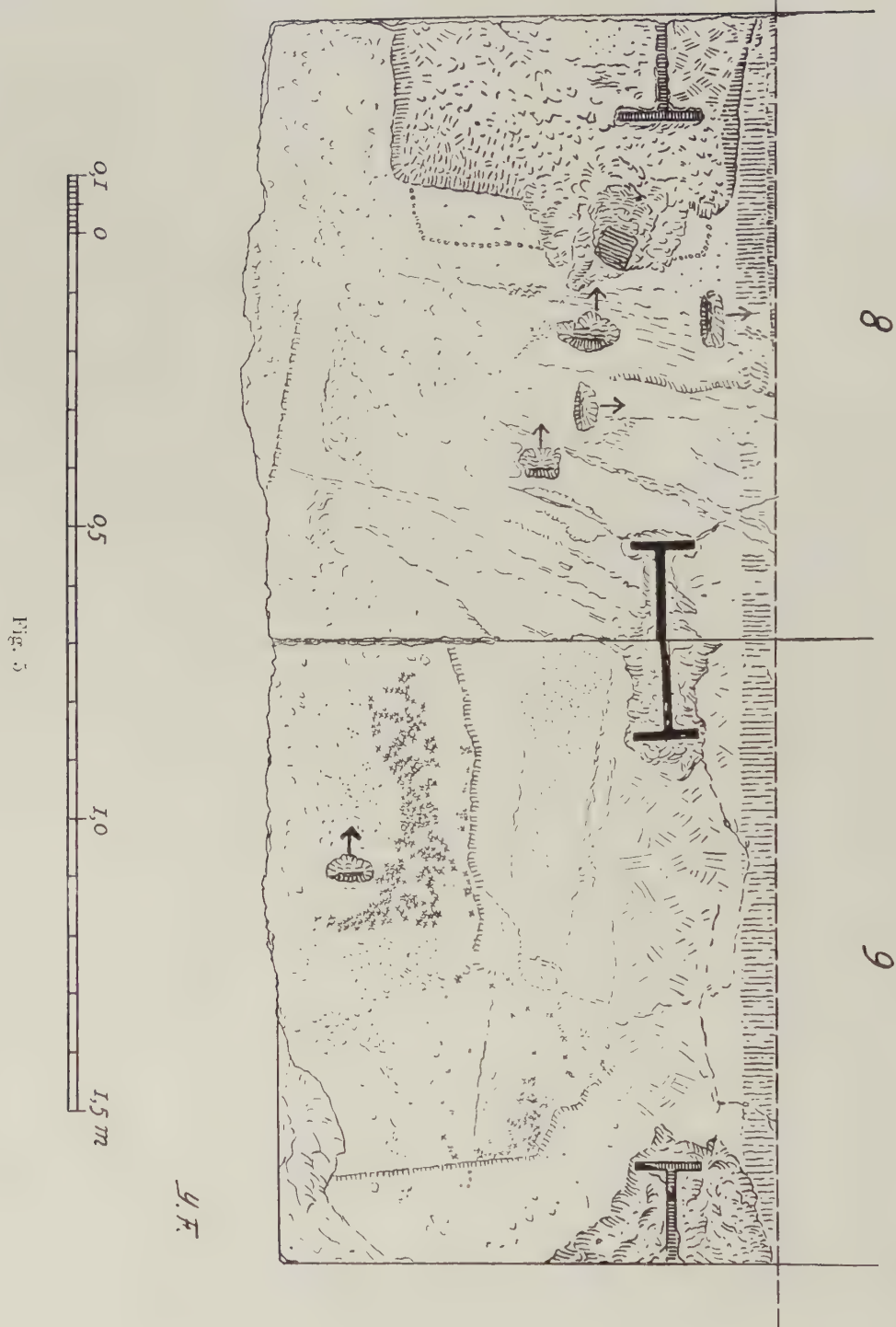
But this solution makes unavoidable in turn the solution advocated for the preceding figure, since there is not room for any but a standing pose between torso H and the nude seated divinity whom we have provisionally called Apollo.

At this point it is advisable to shift our attention to the left end of the lacuna and, leaving this series (Fig. 4) of a running figure, a seated male nude, a standing draped goddess, and a standing nude god with sceptre, spear, or trident in hand, which we have thus far established, to start afresh in the other wing of the pediment.

\* \* \* \* \*

In block 8 there is a distressingly abundant number of pry-holes, each of which must somehow be explained and justified. Fortunately the principle elucidated in § 1 c (p. 3) of our discussion of technical criteria here comes to the rescue. As the arrows in Fig. 5 indicate, both of the pry-holes which run parallel to the tympanon refer in the direction of the tympanon, while both the other two refer toward the left and therefore have to do with statue G, with which also the dowel is connected. None of these marks accordingly has any bearing on the missing statue in this region,—and all of them may have been covered by it, since G was set in position before it was.

None the less, it is not judicious to leave any unexplained detail. To begin with the pry-hole nearest the tympanon, this clearly refers to the latter element in the building, since a joint between tympanon orthostates occurs almost immediately opposite it. The three other pry-holes bear witness to a difficulty in bringing statue G into position. Apparently this was first placed somewhat to the right of its final position and could not be moved sufficiently far toward the left because of interference between the head and the raking cornice,—an interesting indication that the tympanon had been erected and the raking cornice set before the statues were placed in the gable. The right-hand pry-hole may refer to this first position of the statue. To remedy the error in height, the statue was rolled away and a bed to a depth of 0.05 m. scooped out of the pediment floor,—the only instance of so drastic a procedure in either of the Parthenon pediments. Since the raking cornice rises at an angle of 6:25, a gain of 0.05 m. in vertical space permitted a gain of 0.21 m. in horizontal space (which is just the distance separating the two pry-holes). By means of this second or left-hand pry-hole the statue, after the rollers had been removed from under the plinth, was moved over into its final position in the sunken bed and the dowel was fastened into the face of the flying drapery, whose extreme edge later produced the fine drip-line which is so noticeable, 0.10 m. to the right of the edge of the bedding. The intermediate pry-hole is unusually shallow and could have been used, at various moments in the process just described, for moving the right end of the statue back to fit its bed, pressure being exerted against the plinth under





the swirl of drapery at the right rear of the marble. All the pry-holes are accordingly explicable, and there is no reason for connecting any of the cuttings with the first missing statue of the lacuna.

The other technical indications on blocks 8 and 9 have never been fully presented nor correctly understood. Fig. 5 shows a new and careful survey by M. Fomine. The following features require description:

On block 8 there is a band of very smooth surface close to the front edge. It is surrounded by rougher texture and shows every indication of being a bearing surface in close contact with a statue plinth. We may leave undecided, as immaterial, the question whether it was specially dressed for the purpose like an anathyrosis, or whether the surface under the plinth was unusually perfectly preserved from weathering because it happened to fit very smoothly along this stretch of stone. This band ceases at the left opposite the dowel for G, so that the plinth must have ended and returned toward the tympanon at about this point. Thereafter the plinth seems to have swung slightly inward to the right, because there is a typical weathering trough (§ 11 a, p. 10) between the two central pry-holes.

On block 9 the smooth surface which characterised the front edge of 8 has given place to a very rough weathered area with heavy incrustation patina. This area is fully 0.35 m. wide, or more than a third of the depth of the whole pediment. Behind it there lies a very clearly marked boundary beyond which a smoothly dressed and slightly lower surface announces a statue plinth. The outline of this plinth can be clearly followed for more than 0.50 m., after which it jogs still farther toward the rear of the block and seems to terminate. The rear of the block shows the rougher preliminary dressing, and therefore was not covered by statuary. A little further to the right and almost at the right end of the block there appears a very marked bedding for a statue on a rectangular plinth. This turns to the right near the front edge of the block and extends for an indefinite distance over into the next block 10, where it cannot be traced because almost the whole of this floor block has been snapped away and lost. This very well marked bed fixes a sharp boundary at which a wholly new statue begins, and is exactly comparable to the rectangular plinth outline on block 17 in the other wing.

Returning to block 9, there remains to be mentioned a pry-hole cut in the midst of the rough area near the incrustated patina. This pry-hole refers to the left, in spite of the fact that there is a stretch of at least 0.40 m. without any indication of an area on which a statue could have stood. However, the nearby patina indicates (§ 9) that some portions of the statue must have overhung the floor very close to the pry-hole.

Here is the second crux in the reconstruction of the east pediment. Its solution is very similar to the preceding, since once again we can fully explain the evidence only by postulating a seated statue on a rocky pedestal, facing the pediment centre. The "throne" is again about 0.70 m. long, and the space occupied by the whole statue is again about 1.40 m. in length. The height of the statue is the same as that of the "Apollo," since the relative positions in the respective wings of the pediment are identical. But this

time it is impossible to suppose that the foot on the side toward the spectator was advanced close to the pediment edge; for all this region is rough and heavily weathered. Instead, the outer foot must have been carried across the body to the side toward the tympanon, so that both feet were set behind the conspicuous bedding line in block 9. The right thigh and knee must of course have projected forward from the seat, close to the front edge of the pediment, and therefore must have overhung the rough area to the left of the pry-hole and occasioned the heavy patina. The lever in the pry-hole would then have applied its pressure to the shin. As the statue must have been heavily draped, this point of leverage was not a projecting bridge of isolated marble, but merely the nearest available surface of the great mass of stone which constituted the statue. Since the drapery made it impossible for the throne to be exposed between the legs of the statue, as was the case for the "Apollo," it is obvious that the only reasonable point at which the lever could be applied was the one which must have been utilised. There is an exact parallel for such a use of the lever against an overhanging portion of a statue in the kneeling boy V of the west pediment, where a pry-hole close to the tympanon can only apply to the forearm or elbow which passes close to the cutting.<sup>1</sup> There the survival of the actual statue removes all doubt of the correctness of the explanation. As there was no other space between statue and tympanon from which to work a lever, the workmen perforce had to use the dangerous expedient of prying against the detached arm. On block 9 of the east pediment the procedure was without risk, and the place for the lever was chosen naturally and logically with reference to the shape of the statue.

We may venture a further inference on the pose of this figure. With both feet drawn across the body to the statue's left, balance must have been restored by tilting the torso to the right. The left shoulder must therefore have been raised and the right lowered. Indeed, the pose of the legs would be best explained as a corrective adjustment to the act of lifting the left arm and carrying it across the body. Some attribute or action must therefore be suggested, for which a comparable position of the arms and hands would be natural.

Thus it was not only the running figure G which had its counterpart in the other wing; but the strictest symmetry was maintained by the use of two confronting seated figures of the same dimensions, each upon a rocky seat and differing only in a detail of their pose and in the distinction that one was nude and male while the other was fully draped and feminine.

But this symmetry of composition continues; for to the right of our latest seated figure the recurrence of a sloping floor-bar of double breadth suggests the same mechanical solution by which two standing figures brought a portion of their weight to bear upon a single bar. And actually the data are so similar that the argument cannot fail to be identical.

<sup>1</sup> Cf. *Hesperia*, vol. I, p. 17, fig. 10.

Sauer's hypothesis of a seated statue in this portion of the pediment must be discarded; firstly because we have just employed such a figure on a smaller scale, and secondly because the iron bar would pass under the projecting knees of the statue instead of under the throne where the real weight must fall; and the angle at which the bar is set, being even more pronounced than in the other wing, would be wholly inexplicable. Since it proves impossible to straddle the great bar with a single statue, we must assume that there were two figures dividing the space between them. Immediately a logical and satisfactory solution develops.

To judge by the uniform left edge of the plinth (at the right of block 9) the first statue of the pair was feminine. In order to bear upon the bar, the left foot should have been set further back toward the tympanon, and the left leg should preferably be the weight-leg. The position could be either frontal or in profile toward the pediment centre; since, if the figure faced away from the centre, the right foot would be near the tympanon and the left near the pediment edge, in contradiction to the indications. The frontal position is more likely than the profile, since the straight edge of plinth with the flare of drapery behind it, so clearly legible near the right edge of block 9 in Fig. 5 suggests a foot pointed forward, with drapery free behind the heel, rather than a foot turned sidewise in profile. Unfortunately almost the whole of block 10 has been broken away, so that there is no possibility of further evidence for the shape and extent of the plinth. We can only reason that it must have extended far enough toward the right to overlap the iron floor-bar and yet have left sufficient room for the following statue to share this same support. From the marked obliquity at which the bar is set to the tympanon we may conclude that the two figures were not set so close that their plinths actually touched and that the mechanical awkwardness of an intervening space between the two statues was thus obviated by bringing the left hand statue on the rear of the bar and its right hand neighbor on the forward end.

This right hand statue of the pair seems to have been a fully draped and therefore also a feminine figure, to judge by the drip-lines (§ 11b, p. 10) on block 11 (Fig. 10). The mechanical problem is best solved by assuming that the figure stood in profile toward the pediment centre with the right leg back and serving as weight-leg, since in this way the maximum of weight would be transmitted to the floor-bar and the rest of the weight of the body would be largely confined to the interior of the block away from the dangerously overhanging cornice in front. But the continuance of the front line of the plinth almost across the whole of block 11 makes this argument uncertain, since it proves that the plinth was rectangular. If the two statues were approximately of equal dimensions, the second plinth should have extended to about 0.25 m. from the right edge of block 11, and precisely at this point the traces of the plinth die out on the floor.

The symmetry of composition has thus been exactly maintained between the two wings. On either side, a running figure has been followed by a seated statue facing toward the pediment centre and this in turn has been followed by a closely grouped



pair of standing figures (Fig. 6). But measurement will at once show that the counterbalancing pairs of standing figures do not occupy equal floor spaces. Whereas the group in the right wing ends about 1.70 m. before the seated "Apollo," the corresponding pair in the left wing extends nearly 2.20 m. beyond the seated statue. We have therefore approached 0.50 m. nearer to the pediment's central axis in the left than in the right wing. This asymmetry of position combined with such complete symmetry of subject-matter must have its explanation. As there is no apparent reason in the subjects themselves, to suggest why a pair of standing statues on one side should occupy so much more space than a pair of standing figures in the equivalent position on the other side, the explanation must lie nearer the pediment centre in the figures which are yet



Fig. 6

to seek. Those figures cannot be very numerous, for the great lacuna has now been closed to a gap of only 4.50 m., covering the four floor-blocks 12, 13, 14, and 15.

At this point it is fortunate that we can appeal to the testimony of Pausanias who in a most laconic description at least vouchsafes the information that the east pediment sculptures "had to do with the birth of Athena." We can hardly fail to assume that Zeus and Athena appeared in the centre of the pediment as protagonists in the scene. It has further always been assumed that the travelling Zeus was enthroned, as in the vase illustrations, and not a standing figure. This is, of course, a very fundamental assumption on which the entire composition will depend; yet it is the only natural supposition to make. It may however be doubted whether all those who have subscribed to such a solution have fully visualised or correctly calculated the dimensions of the statue thereby involved.

At the three central blocks the pediment has a height of 3 m. at left and right and 3.43 m. at the axis. To be sure, no statue could or would be fitted into the exact apex of the pedimental triangle, so that 3.20-3.25 m. will represent the maximum height actually utilisable. Making the usual allowance of 0.20 m. for head-room and plinth,

our problem accordingly requires a seated figure very close to three metres high. For the sake of comparative scale, so as to harmonise more nearly with the adjoining statues, it would be possible to imagine a somewhat smaller figure; but any statue less than 2.80 m. in height would fail to give the impression of a filled pediment, while the analogy of the fully occupied space of the Olympia pediments would suggest a figure actually a trifle over 3 m. in height. Such a figure could not be shown in full front view, since it would not fit the narrow pediment shelf (cf. p. 13). If in profile, the normal canon of proportions would produce a statue 1.80–2.50 m. long and 1.00–1.25 m. deep, which is still too wide for the 0.90 m. of the pediment shelf. Consequently, the “relief profile” pose must have been used, with the lower part of the body in profile and the torso turned more nearly full-front so as to bring the breadth of the shoulders parallel with the tympanon. With such a pose, a statue 3 m. high would presumably occupy a plinth 0.80–0.90 m. deep, or the entire width of the pediment shelf, and 2.10–2.40 m. long, or fully two entire floor-blocks (2.11–2.17 m.). By raising the height of the seat of the throne and introducing a footstool, the size of the actual figure could be slightly diminished without loss of total height, and the length of the plinth could thus be restricted to 2.00–2.25 m. It would scarcely be possible to reduce the dimensions any further. About half of our central gap of 4.50 m. will therefore be filled by the throned Zeus alone. What position does he occupy?

Between the exact axis of the pediment and the nearer of the pair of draped feminine figures which we have deduced for the left of the pediment centre, there is precisely a distance of 2 m., which is the minimum possible for the Zeus. If he be placed here, it is immediately apparent that he must face toward the left, so as to bring the main colossal weight of the throne and torso over the pair of iron bars which lie on either side of the joint between blocks 12 and 13.<sup>1</sup> Athena then must appear *behind* the throne, and the father must look away from his new-born daughter whom he has not yet seen. This is so unsatisfactory a solution that few would welcome or accept it. But it can be shown on technical grounds to be impossible.

In the first place, the arrangement of the iron bars would be wholly irrational and therefore could not have occurred. The bar in block 12 would be correctly placed under the forward position of the throne; but the other bar, instead of being placed parallel to the first and under the rear of the throne, would begin under the centre of the superimposed weight and converge on the other bar—a device which no thinking mind could employ, as it precisely fails to make use of the bar for the only purpose which it can have been intended to serve. Furtwängler in his *Intermezzi* (p. 22) urged this objection with perfect logic against Sauer. And it is quite unanswerable.

Secondly, if Sauer was correct in recording a pry-hole in block 13 close to the left-hand slanting bar, the plinth of the throne would have covered this cutting and made it unusable. For it is clear that the legs of the throne could not have been carved so

<sup>1</sup> These details are summarily but correctly shown in Fig. 7.

as to be separately detached on the floor, but must have rested upon a common plinth (as in the statue of the archaic seated goddess in Berlin).<sup>1</sup> Otherwise the whole weight would concentrate on four points and could not be made to bear on the iron bars. However, I do not press this argument of the pry-hole, as it is not certain that the floor-mark in question can be so identified. The area is badly chipped and the apparent cutting may be only an accidental mutilation of the surface.

Thirdly, such a statue must have left some trace of its outline, however imperfect and fragmentary; but none exists on block 13 or on block 12, whose broken front half (missing in Sauer's time) was identified by M. Balanos among the miscellaneous architectural fragments on the ground in front of the Parthenon and restored to its original place in 1931. It is frequently assumed that the peculiar floor-mark resembling a long narrow bar in the exact axis of the pediment (very near the centre of block 13) marks the division between two statues which were set on either side of the pedimental axis and thus shared the pediment centre between them, in much the manner employed for the Poseidon and Athena of the west pediment. It even seems to be a common misconception that there is Sauer's authority for such an interpretation; but actually Sauer was careful not to make any such claim, in spite of his determination to set two statues along the pediment axis. He never thought that this central "bar" was formed by the traces of two adjoining plinths, and always carefully called it a "*Randbank*" and equated it with those slightly raised "setting-tables" which not infrequently occur under the rear corners of statues (§ 2, p. 4). In that case it could not have marked the division between two statues, but must have lain under one or the other of the pair, close to an outer edge of one of their plinths. As the axis of the pediment passes directly through this "bar" (and not to the right of it, as Sauer for some reason erroneously drew it), one or the other of the statues must have slightly overlapped the pediment centre at the expense of the other, and this alone would have destroyed the symmetry of Sauer's arrangement. But the real difficulty is that there ought to be traces of two adjoining beds, and there is no such thing. Furtwängler was quick to seize on this and to exclaim correctly and triumphantly that the absence of such beds ("*Leeren*") was a fatal objection to dividing the pediment centre between two statues.<sup>2</sup> And in fact Furtwängler's attack on Sauer's arrangement is unanswerable; and Sauer made no headway when in a later article<sup>3</sup> he tried to controvert Furtwängler's criticisms of his position.

The correct interpretation of this central "bar" is the third and final crux in the theoretical reconstruction of the east pediment. The object in question may be described as a long narrow area, 0.70 m. by 0.10 m., beginning close in front of the tympanon, running very nearly though not exactly at right angles to the tympanon, and ending

<sup>1</sup> *Antike Denkmäler*, III, 39.

<sup>2</sup> *Intermezzi*, p. 23.

<sup>3</sup> *Der Weber-Laborde'sche Kopf*, p. 56.



about 0.12 m. from the forward edge of the pediment almost in line with the front ends of the cuttings for the iron floor-bars. It is thus shaped exactly like one of these latter, except that it fails to extend back into the tympanon wall. It is so located that it almost exactly bisects the triangular area formed by the convergence of the two floor-bars in this central floor-block. This may be merely a coincidence; but the slight failure of this central "bar" to run precisely at right angles with the tympanon seems to be related to the fact that the two iron floor-bars do not converge at precisely equal angles, with the result that a central axis run between them would have the slight obliquity to the tympanon which characterises this central "bar." The two true bars and the false bar which marks their axis thus seem to be parts of a single geometrical scheme.

The axial "bar" has length and width but almost no thickness. It is not even definitely and consistently raised above the surrounding surfaces of stone, as its north edge is alternately higher and lower than the area outside. At the front, a rough and higher stretch of weathered stone passes from north to south across the "bar." Such a floor-mark might be the remnant of an area once raised and now all but obliterated (and it may be recalled that these central floor-blocks have been badly wasted and eroded); but it could even more naturally have been produced as a result of the presence through a long period of time of some superposed object, around which erosion would have been more pronounced according to the principle mentioned on p. 10 (§ 11 a). In that case it is the weather-imprint of an actual bar which rested directly on the floor instead of being sunk in a special cutting.

There should be complete agreement among investigators that the "bar" does not in the least resemble an area between adjacent statue plinths, since it is too regular in outline, extends too close to the tympanon, has no returning boundaries running left and right from its forward and hinder ends (cf. the traces of actual statue plinths in the right of block 9 and in the left of block 17), is not weathered more roughly and deeply than the surrounding stone (cf. the exposed strip between statues near the right edge of block 18), nor covered with patina incrustation. Finally, and unanswerably, such a division between statues should not form a closed rectangle, but should show both ends open, so as to be continuous with the rest of the exposed floor-surface along the edge of the pediment.

Yet it is almost as flagrantly erroneous to characterise the axial "bar" as a "*Randbank*" or "setting-table." There are twenty-one undoubted examples of "setting-tables" in the two pediments, and all agree in being small, roughly rectangular patches such as could serve as a pivot for turning a statue. Personal experience with a skilled foreman in the excavations at Corinth have taught me that a heavy block of marble which refuses to budge can be made to rotate with the utmost ease if it is first jacked up and a small flat stone or tile is slipped in between it and the pavement. The same experience in antiquity must have been responsible for the invention of the setting-table in the pediments. Even though these projected above the surrounding floor only by the difference between the general preliminary and the final special floor-dressing, this projection of a

mere millimetre would have been enough to make it possible to rotate the rest of the statue on this pivot by prying. The long narrow "bar" in the centre of block 13 would have been utterly useless in such a connection.

The true explanation of the "bar" was long ago advanced by Bulle, whom Furtwängler quoted to the following effect:

"Der eigentliche Sinn dieser großen „Randbänke“, d. h. ganz flachen Erhöhungen zwischen den Eisenbarren, ist aber offenbar der, zu verhindern, daß die Figur hohl aufsteht, wenn die Eisenbarren, wie dies leicht vorkommen mußte, ein wenig über den Giebelboden vortraten..." (*Intermezzi*, p. 23).

In short, far from marking an edge or boundary between statues, the mysterious axial "bar" shows that a single great plinth covered both the converging iron bars on the central floor-block of the pediment. The central "bar" was a relieving-area intended to prevent this plinth from cracking under the great weight of the statue which it carried. A single figure therefore must have occupied the centre of the pediment. A very simple piece of arithmetic will show that (if Zeus was present in the pediment at all,—and how can we imagine the birth scene without the parent?), it is he who must have held this dominant central position. For we have already reduced the lacuna to a central gap of 4.50 m. and we have calculated that a throned Zeus must occupy at least 2 m. of floor. Our central gap of 4.50 m. is so situated that 2 m. lies to the left and 2.50 m. to the right of the central axis. Hence if the Zeus be placed at the left of the gap, it will extend the entire distance up to the axis; while, if it be placed at the right, it will extend to within 0.50 m. of the axis and be set on the two floor-blocks 14 and 15, which alone in this region have no cuttings for iron floor-bars and hence would be least able to support so colossal a statue. In neither case would there be sufficient room left at the centre of the pediment for another statue such as we have been obliged to assume. Hence this great central statue must itself be the Zeus.

There remains a maximum of 2.50 m. of unfilled space to be divided fairly equally on the left and right of this central statue, since figures high enough to occupy a position anywhere on the central blocks of the pediment (i.e. statues at least 2.70 m. in height, exclusive of their plinths) could hardly be crowded into less than 0.90 m. of space apiece (cf. Fig. 1), and the normal demands of symmetry would require a considerably more impartial balance.

If Zeus is throned in the centre of the pediment, the floor-marks make it instantly clear how he should face and exactly where he should sit. Three quarters of the weight of such a statue would be concentrated upon the plinth under the throne, and this plinth would be at least 1 m. in length, or roughly the equivalent of an entire floor-block. But this is precisely what we require to span the two converging iron bars in the central block. Here, then, the throne must be set, bringing the head of the colossus in the very apex of the pedimental triangle. But shall he be turned to face toward the left or the right? In the first case the statue would extend to within 0.50 m. from our last standing draped statue (p. 30); and such a gap of 0.50 m. would

be impossible to fill, as it is too scant for another statue. To be sure, the straight floor-bar in block 12 would pass logically and neatly under the footstool or feet of the great statue; but it is doubtful whether the weight of this part of the statue would be enough to demand such a precaution. But if the statue faced toward the right, there would be a free space of about 1.40 m. behind the throne on the left and of about 1.10 m. in front of the throne on the right—each adequate for a statue. Finally, the floor-marks on block 14 would precisely and exactly outline the footstool of Zeus and define a statue within 0.05 m. of the hypothetical length.

There is thus only one logical solution—that championed years ago by Professor Six in the *Jahrbuch* for 1894. By a fatality, Six insisted on spreading the throne of his Zeus statue over all three of the iron bars in the centre of the pediment, with the result that he exposed himself to destructive criticism from Furtwängler in the *Intermezzi*, which appeared a year later. Furtwängler failed to see or to allow that though Six was wrong, it was only in an unessential point. Six himself had admitted that the footstool had been worked out too large in his restoration and was out of all proportion to the Madrid puteal version which he had expressly accepted as his prototype. Had he left the footstool unimproved and followed the Madrid puteal merely mechanically, the throne would automatically have restricted itself to the two converging bars on the central floor-block and all of Furtwängler's strictures would have lost their point.

To put this cardinal element in the whole reconstruction beyond the reach of such polemics, it is necessary to examine once again and more fully the technical and material evidence which has been so often and so grievously misunderstood by all save Furtwängler—whose obstinate insistence on forcing the Athena Medici into the very centre of the pediment made him blind to the one obvious solution whose technical difficulties he had so clearly and so adequately mastered!

“Wenn man absieht von jeder Hypothese über die verlorenen Figuren und nur jene Spuren des Giebelbodens betrachtet, so kann man eigentlich gar nicht daran zweifeln, daß der Block 13 die Hauptlast, die schwerste Figur zu tragen hatte,”

wrote Furtwängler trenchantly and convincingly in the same *Intermezzi*.

The weight of this central statue is truly formidable. A marble block such as we have assumed for the statue of Zeus, with plinth dimensions of 2 m. by 0.80 m. and with a height of 1.50 m. to the knees and 3.10 m. to the crown of the head, could hardly fail to comprise over two cubic metres of stone, and must accordingly have weighed between 5,000 and 6,000 kilograms, or approximately six tons. Three quarters of this weight must have fallen on the plinth under the throne and therefore on the two iron bars which, diverging toward the rear, distributed their accumulated weight under two separate blocks of the tympanon. At the front, the two bars are situated under the true centre of gravity of the great torso and lie only a little over a foot (0.34 m.) apart; but where they pass under the farther legs of the throne, near the tympanon, they have diverged until they lie a whole metre apart. Even if the marble block of the throne were hollowed out behind in order to lighten it,—a probable sup-



position,—there would still be a great load on the portion of the plinth between the bars; and the plinth would thus resemble a loaded beam supported only at the ends and therefore in danger of cracking in the middle. For this reason the third “bar” was employed. Running midway between the two divergent bars, it brought support to the exact middle of the loaded beam to which we have compared the plinth of the throne. Insofar as this new bar took any weight from the iron floor-bars, it transmitted it directly to the floor-block and so tended directly to counteract the benefit which

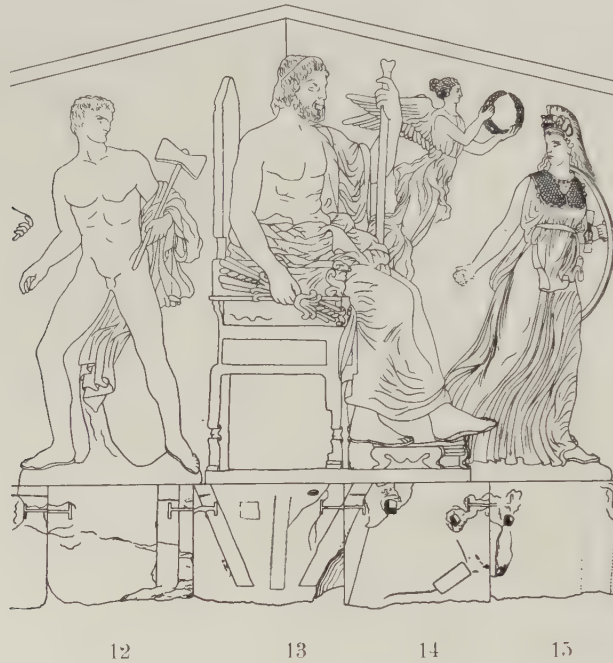


Fig. 7

these floor-bars might be expected to confer; but it should be observed that at the front where the pediment floor was an overhanging cornice and therefore in danger of snapping, the iron bars were close together and the span of the plinth was negligible, while inversely at the back of the pediment where the iron bars were far apart and there was more likelihood of pressure on the central “bar,” the floor was safely situated over the entablature and could not possibly snap or break.

Why were not the iron bars set at right angles to the tympanon and spaced evenly under the legs of the throne? Probably because the throne was not weighted evenly (cf. the restoration in Fig. 7). At the front of the pediment the weight is mainly on the centre of the throne; hence the bars are close together. At the rear, toward the tympanon, the throne was probably hollowed out in order to lighten it, so that the main

weight came on the legs of the throne and the bars were further apart. Also, at the rear the centre of gravity of the Zeus shifts toward the forward edge of the throne under the left arm and thigh of the colossus. The only danger in thus spreading the bars was the risk of cracking the plinth, and this was obviated by the "axial bar," which has so misled the modern investigator.

It would seem, then, that the mechanical aspects of the problem of carrying a six-ton statue on an overhanging pediment shelf had been very carefully studied and the problem very rationally and thoughtfully solved.

Are we to think of the auxiliary "axial bar" as an extraneous and separate piece, or merely as a slightly raised portion of the floor surface, reserved like the "setting-tables" in the final dressing of the marble? The answer must depend on our opinion how the iron floor-bars were bedded and how much they projected above the general floor-level. If we assume that the iron bars jogged with an elbow so as to rest inside the floor-cuttings within 0.01 m. of the bottom of the bed (p. 7) and that the bars were not more than 0.08–0.10 m. thick, then the top of the bars would have projected only 0.035–0.055 m. above the surrounding floor, and the statue plinths could easily be keyed down over these bars so as almost to touch this floor. Could that adjustment have been so delicate and accurate that a narrow strip of stone projecting only about a millimetre higher than the rest of the floor would have exactly touched the plinth suspended on the iron bars? If not, then we must assume that the central "bar" was not thus produced like the "setting-tables" by omitting the final dressing, but that it is merely the weather-mark of a thin strip of metal or stone inserted beneath the suspended plinth. We cannot object that, if metal, such a strip should have left a stain upon the marble, since it is only under the tympanon (and there only occasionally) that the rust-stains have survived.

To the left of this central "bar" and not far from the tympanon there is a floormark in the shape of a square, which differs from the usual run of "*Randbänke*" or "setting-tables" only in its comparative regularity of outline and the fact that at least two of its sides are outlined in the tiny pock-marks which usually betoken the edge of a raised face of marble (§ 12b). It is tempting to see no difficulty in this particular mark and to dismiss it by calling it a "setting-table," used in bringing the Zeus into final position. But I doubt whether a setting-table could be made to work where a statue had to be lowered upon iron bars into which its plinth keyed; and a setting-table implies a use of levers, which in turn involve pry-cuttings, and these should be in evidence somewhere along the front edge of blocks 13 and 14, where none are visible. Bulle explained this square patch as part of the same device as the central "bar," for relieving the pressure on the statue plinth above it. I am rather more inclined to think that the workmen must have introduced some sort of tile or plaque under the plinth while they were jacking or lifting and lowering it, and having got it wedged, made no effort to remove it after the statue was finally in place. The present mark would thus be merely the weather-imprint of this piece of stone, tile, or metal, which itself naturally vanished

after the statue above it had been removed and destroyed. The drip-lines occur on the sides toward the tympanon and toward the nearest iron bar, which are the two sides from which water could most easily work in. (A "setting-table" to which water has penetrated under a statue may be seen in block 18. It is characterised by an eaten trough along the outside of the table, and not by drip-holes, which imply more than a mere millimetre of height for the water to fall.) If any one of the three preceding explanations (Sauer's as setting-table, Bulle's as plinth support, mine as workman's prop) is accepted, the material evidence for the Zeus statue is completely accounted for. If none of the three explanations is admitted, it is incumbent to suggest some other explanation with a clearer right to acceptance. It is not apparent that any explanation which can be advanced could seriously affect the great central statue, since there is no possibility of placing a seated Zeus elsewhere on any of the central blocks of the pediment so as to conform with the technical evidence. We are therefore pragmatically in possession of the proof how and where the chief figure of the east pediment was posed and placed.

It may be asked why the converging bars under the throne were not oriented exactly true with the tympanon rather than so arranged that their medial axis, the much-discussed "bar," ran very slightly obliquely? Obviously this was done because the throne itself was not set quite parallel to the tympanon but at this slight angle of about 3°. By this minute turn the throne was swung sufficiently to suggest that the pose was not a pure profile, and the torsion in the upper body of Zeus was made more natural. The narrowness of the pediment prevented a more thoroughgoing displacement. On the Madrid puteal relief the throne of Zeus is drawn with exactly this slight but indispensable obliquity. In the pediment, this slight shift in orientation is an accessory proof that the Zeus faced toward the right and not the left.

Our calculations suggested a statue with a *minimum* extent of 2 m., whereas actual measurement of the floor-marks yields a *maximum* distance of scarcely more than 1.90 m. from the rear of the throne to the front of the footstool. The discrepancy would perhaps pass without comment, were it not that immediately beyond the footstool, on either side of the joint between blocks 14 and 15, there is incrustated patina, indicative that some portion of a statue here overhung the floor. The inference that one foot of Zeus must have projected beyond the footstool, thus increasing the true overall length of the statue to 2.10 m., might be criticised as too fantastically elaborated, were it not for the peculiar confirmation that on the puteal relief the left foot of Zeus projects precisely in this manner beyond the footstool (for which undignified behaviour the king of gods was taken to task by Amelung<sup>1</sup> many years ago). We shall shortly see the ulterior motive for this device. The bronze-green with which this particular fleck of patina is stained (§ 10) seems to prove that the royal sandals were adorned with gilded bronze ornaments of some sort.

<sup>1</sup> *Die Basis des Praxiteles aus Mantinea*, p. 14, where will be found Amelung's objections to considering the puteal relief fifth-century in style. I replied to all of these strictures in *A.J.A.* 1925, pp. 123—129.



There is a further piece of indirect evidence to confirm our central throned statue. On p. 30 it transpired that the group of two standing figures in the right wing was more crowded than the corresponding pair in the left wing. As no inherent reason for this discrepancy could be discovered locally, it was natural to suspect that an explanation must be forthcoming from the pediment centre. A more acute observer might have reasoned that the disturbance must be due to some asymmetry in the centremost statue on the pediment axis, since any other figure could be counterbalanced by its *pendant* in the opposite wing. He might thus have reached the correct conclusion that the central axial statue must have been a seated figure facing the right, since this is the only pose which could not be made to balance equally on the axial line and would cause a compression of the figures in the right wing. Actually, the pose of the throned figure brings the statue some 0.90 m. further into the right wing than into the left—a very considerable handicap for a symmetrical composition. This discrepancy is reduced to about 0.50 m. by assigning 0.40 m. more to the first statue on the left than to the corresponding one on the right of the centre; and this remaining discrepancy of 0.50 m. was reduced to zero by grouping the next pair of figures on the right more closely than the corresponding pair on the left, as we have already observed. By the time the seated statues have been reached, complete metric harmony has been restored. We have thus a final and, when once detected, completely convincing proof that a throned statue such as we have assumed occupied the very centre of the pediment. The east pediment did not agree with the west in dividing the centre between two figures, but adhered to the immemorial tradition of the single axial statue.

Only two figures still remain to be discovered; and for both of these the floor-space has now been definitely limited. To the left, behind the throne of Zeus, there is a gap of 1.40 m., sufficient for only a single figure. Since the cornice height here ranges between 2.80 m. and 3.00 m., a glance at the canonic table in Fig. 1 will lead us to expect a frontal figure spread as broadly as possible. But the cutting for an iron floor-bar only 0.20 m. behind the throne of Zeus demands that the main weight of the statue, insofar as it lies in the front overhanging part of the pediment, must be very markedly concentrated near the right of block 12. We must accordingly assume a figure with the left foot well forward near the pediment edge, with the left leg as the weight-leg, and with the right foot well back toward the tympanon near the joint between blocks 11 and 12,—in short, a striding pose such as only a male figure could assume. There are no other floor-marks of any sort on block 12, unless a markedly rougher condition of the newly replaced front portion of the block may be taken as proof that no large uniform plinth covered the entire block and that therefore some sort of striding pose with feet wide apart is an obligatory assumption. It cannot be mere coincidence that once again the Madrid puteal supplies a figure exactly fitted to the space and precisely complying with the requirements of pose and ponderation. Hephaistos has turned away after dealing the maieutic blow to the skull of Zeus. His axe and gathered drapery rest on his left arm. His left foot is still close to the rear of the throne, near

the forward edge of the pediment; he has been standing between Zeus and ourselves, the spectators of the scene, and has thereafter whirled on his left foot and strode out with his right. But in his departure he turns his head back and gazes past Zeus toward the figure beyond.

This figure, by the testimony of the puteal and by every dictate of reason, can only be Athena, the newborn goddess fully armed. Yet there remains available for her only a space a metre wide, while the puteal Athena when enlarged to pediment size demands, like Hephaistos, 1.40 m. And for further difficulty there is no cutting for a floor-bar to support her. Of the seven great statues which constitute the central group of the east pediment, this is the only one which rests no weight upon a bar. Fortunately the two difficulties cancel each other. For, if the statue is of the size of Hephaistos, yet does not bear at any part upon an iron bar, the whole of the statue must have been situated back near the tympanon, and here there is ample available space for the full extent of the statue. Of the 0.90 m. which make the width of the pediment shelf, the innermost 0.20 m. come over solid entablature; not until a point about 0.50 m. out from the tympanon does the overhang of the pediment become a dangerous factor. But if the Athena is restricted to the undangerous rear half of the pediment floor, there is room for her behind the footstool of Zeus. And now at last we understand why the throned Zeus places one foot directly in line in front of the other. A sandalled foot of a figure on such a scale would be 0.25–0.30 m. wide. Were the feet side by side, there would not be room behind the footstool; but placed in line, they permit a passage nearly 0.50 m. between feet and tympanon, and this is enough for the foot and flying drapery of Athena. But in that case, the footstool must have been falsely devised and have possessed only half its proper width. And this necessity furnishes an explanation for the peculiar marking near the front right edge of block 14, where the bed-outline for the footstool shows at the corner a peculiar additional rectangle set at a bias. On this rectangle there was fitted the foreshortened relief-carving which created the optical illusion of the face of a footstool of normal depth—some 0.60 m. of pretence foreshortened into 0.23 m. of actual stone (Fig. 7).

With this figure of Athena, shown as though emerging from behind her father's throne, the two dowels at the right of block 14 and the left of block 15 must be connected—though I am uncertain whether we are to assume the drapery between the feet to have billowed back so far that the dowels could be set from in front or that the statue was lightened by being hollowed out behind sufficiently to give access to the dowel from the tympanon side. In any case, the presence of two large dowels in a single statue suggests anxiety about so tall and thin a marble block. Exactly as in the case of the two other running figures G and its counterpart on 19, the dowels were set in the unweighted portion of the block farthest from the centre of gravity, as though there were danger lest the statue be top-heavy and fall forward. Presumably, stability was still further secured by horizontal anchors into the tympanon wall in back. If we were correct in thinking in § 7b that statues resting on iron bars were not dowelled to the floor, we

must connect these dowel-holes in block 14 with a statue which did not have any connection with the bars in blocks 13 and 16; and therefore from the dowels alone we should be obliged to assume a statue set close to the tympanon.

There remains one floor-mark unexplained—the large square cutting at the rear of block 14, which seems too heavy for a statue dowel. But there also remains a figure on the Madrid puteal which has not yet been considered or included, a Victory flying from Zeus with a wreath for the head of Athena. If we compress the two chief figures of the puteal relief into the space available for them in the pediment, by bringing the drapery of Athena behind the footstool of Zeus, this Victory must be moved back toward the left till her feet begin to disappear behind the knees of Zeus. Her feet and pendent drapery will then poise exactly above this square cutting in the floor.

Scholars have speculated whether it would have been mechanically possible to include in the east pediment such a floating figure as this Victory of the Madrid puteal. The technical objections are not great. The original Nike may be calculated to have been about 1.40 m. high, with a reach of about 1.30 m. from tip of wing to outstretched wreath. Such a figure in marble would weigh at least 700 kilograms or 1,500 pounds. Hence it would be too heavy to suspend merely on metal wall-hooks in the tympanon and would have to have been supported from beneath on some sort of a pedestal, like a crude forerunner of the Nike of Paionios (for which it may have furnished the inspiration). Such a pedestal need not have been more than a strong vertical prop grounded in the pediment floor, and would have been wholly invisible behind the legs of Zeus. The upper part of the figure could then have been bolted to the tympanon for extra support and to prevent it from falling forward, if its centre of gravity came in front of the pedestal. Because of this mechanical connection and because the great Zeus would in any case squeeze it close to the wall, the statue could not project more than 0.30 m. from the tympanon. The floor cutting at 0.13–0.23 m. in front of the tympanon line is therefore at exactly the proper spot to carry a supporting pedestal or prop for such a figure.

One might perhaps explain this square cutting alternatively as the socket for the sceptre which the Zeus of the puteal holds with his raised left hand; but a three-metre sceptre with a spearlike shaft would naturally imply a round socket (like that in the floor between blocks 15 and 16) and be a very much smaller affair than this, which measures  $0.09 \times 0.10$  m. In the pediment original, the sceptre was probably grounded in the marble of the left thigh behind the convenient billow of drapery which appears at just this point. The great square "dowel" remains for the Nike. Since there is abundant room for such a figure, if her wings pass behind Zeus' sceptre, and since there exists otherwise an unpleasant void between the torso of Zeus, set back on the throne, and the torso of Athena, leaning far forward and away, it is gratuitous skepticism to accept the testimony of the Madrid puteal so literally in every other respect and yet to accuse its author of a sudden access of invention in this single element. The Nike is a Pheidian device for suggesting the descent of Athena from her father's head, which could not with dignity be more literally represented.



For purposes of his relief, the neo-Attic master of the puteal spaced the Athena and the Zeus more evenly, having no need to re-establish a pedimental balance jeopardised, as we have seen (p. 39), by the profile pose of the axial figure. Yet it may be doubted whether his slight and very obvious change was an improvement; for he destroyed that genial inspiration of his great prototype in which Athena was shown in the very moment of emerging from behind her father's throne, in token of that issuing-forth of the newly born which the naive tradition of the black-figure vases had frankly and crudely pictured by painting a doll on the top of Zeus' head. And a very striking composition was destroyed, which can be regained only by moving the Athena into her proper place to produce an exactly symmetrical balance between her and Hephaistos on either side of Zeus. In the *Jahrbuch* for 1906 (p. 41) Prandtl pointed out a still more striking indication of the pedimental origin of these figures, *viz.*, that the tilt of the axes of Hephaistos and Athena to right and left of a true vertical is precisely the  $13\frac{1}{2}^{\circ}$  needed to set them at right angles to the sloping cornice of a temple roof. Yet unaccountably Prandtl failed to see that if this indication means anything at all, it proves that the two leaning figures were symmetrically disposed on either side of the vertical central axis marked by Zeus. A glance at the Madrid puteal (Fig. 9) will make clear the origin of the "biaxial heresy" of Sauer and those who have followed him. Between Zeus and Athena there is a definite hiatus, an *ictus vacui*, to coin a phrase. Modern students have been right in their feeling that this hiatus must have an explanation; and naturally they have found that explanation in the axial pause between the two halves of a composition, not appreciating that there was no such interval between the original statues. We have only to reassemble the puteal figures correctly, as in Fig. 7, to be convinced that the Zeus alone occupied the pediment centre.

The intricate difficulties of the floor-marks of the four blocks under the three central statues are thus completely resolved; but it is very doubtful whether they could have been interpreted without the aid of the Madrid puteal. It is easier to reason backwards than forwards; yet the proof is not therefore less convincing. No one who has once had the patience to examine how marvellously the Hephaistos, Zeus and Athena of the puteal resolve every difficulty and give a clue to every problem in an investigation full of subtle and complex factors, will hesitate to applaud the brilliance of Schneider's intuition and the correctness of his discovery.

By a very curious perversity the perfectly obvious further inference that the remaining three figures of the Fates on the same puteal were derived from the same source has been unanimously rejected by almost every scholar who has busied himself with the problem. Hauser raised the issue, only to decide categorically against it later; and Professor Ernest Gardner is perhaps the only conspicuous instance in our archaeological literature in favor of this solution, which is not only attractive and intrinsically probable, but now turns out to be correct.

The additional hint from the recurrence of the identical group of three *Moirai* or Fates on a plaque from Rome now in Tegel (Fig. 8), in conjunction with a similar



Fig. 8. Plaque with relief of the three Fates. In Tegel

plaque on which the same Hephaistos and Zeus and probably the same Athena were carved, was ignored for the good reason that the two plaques could not be proved to have been found together, while it was indisputable that their marble and technical execution were dissimilar. Yet all the figures of the Madrid puteal copy one and the same style (though this has been emphatically denied by many otherwise competent critics), and this style can only be the Attic of the Periclean period. More than anything else, the well-known arbitrariness of the neo-Attic workshops in combining unrelated and even discrepant sources for their products led scholars to assume that



Fig. 9

the Madrid well-head was a mere pastiche. And perhaps not all had been able to make the journey to the Spanish capital to inspect the famous, but little visited, monument itself.

A peculiar accident encouraged the belief that the puteal drew from two distinct sources. All current reproductions of the relief go back to the drawing which Schneider published in his original article. The puteal, being round, bears a continuous decoration in which no beginning or end is indicated; and Schneider in setting out the figures upon a flat surface chose to cut the circle between Hephaistos and the nearest Fate, with the result that the unrolled design showed the three Fates on the right beyond Athena (Fig. 9 *a*). Had Schneider made his cut between Athena and the first Fate, the three Moirai would necessarily have appeared on the left beyond Hephaistos (Fig. 9 *b*). The shears of Destiny had cut blindly, since the original statues of the Fates belong at the left and not at the right of their companions.



The results of the study of floor-blocks 8-11 may briefly be recalled. Immediately beyond the running "Eileithyia" (G) a draped woman in profile toward the right sat upon a rocky throne; her left arm was raised, her right hand lowered, and both her feet were drawn across to her left. Beyond her stood two women, the first probably full-front with her weight upon her left foot, the second in profile toward the pediment centre with her right leg set back and serving as weight-leg. This entire description so precisely characterises the three Fates of the Madrid puteal that it should scarcely be a matter for surprise that, if we enlarge these figures to the necessary size to bring them under the sloping cornice of the pediment and complete them plastically as statues in the round, they will fit the marks on the floor-blocks. I leave the details of the proof to Fig. 10, which was constructed by purely mechanical means and is therefore wholly objective. The central Fate is a trifle too slender; but otherwise the merely photographic construction is flawlessly exact.

What is the logical value of this "proof"? Strictly, nothing more has been established than that the figures of the three Fates, which appear in relief on the puteal and the Tegel plaque, conform so exactly in pose and arrangement with every technical requirement and deductive inference from the actual temple gable that they *might* have been copied from statues on floor-blocks 8-11 in the east pediment of the Parthenon. Add the remarkable fact that this agreement between puteal and pediment continues without interruption through the rest of the puteal relief, so that an entire sequence of seven figures, when enlarged to pedimental size (or rather, sizes!), meets every demand of a most intricate combination of technical indications,—and it is wholly safe to assert that among the thousands of reliefs which have survived from Greek and Roman times there cannot be found another one which by the mere mechanical process of enlargement will produce figures capable of filling the pediment without contradicting any of the stipulated conditions. That the one instance should be sheer coincidence has, mathematically, incredibly huge odds against it. It is no more likely to have happened by mere chance than it is likely that the first seven cards dealt from a thoroughly shuffled pack should be a sequence of ace to seven of hearts (and this latter accident, unless my arithmetic is at fault, has odds of more than 600,000,000,000 against it). And yet... all *might* be mere coincidence after all, a curious freak of archaeological fortune. Perhaps we ought to be convinced; yet if we are still skeptical, suspecting the validity of the method, the accuracy of the observations, the cogency of the deductions, where all is so intricately interdependent,—we may assert that, thanks to the inaccessibility of the Parthenon pediment and the brilliance of an able artist's pencil, the matter can be made to look well enough on paper; but nothing short of the actual original statues or independently authenticated copies can set the last doubts at rest.

But would we necessarily recognise such statues if we saw them? Let us suppose that I could produce several fragments from one of the three Fates, as closely resembling the corresponding details of the Madrid puteal and the Tegel plaque as is possible when colossal sculpture in the round is thus copied in small-scale relief; and let us further



Fig. 10. The Fates of the Madrid Puteal enlarged to pedimental scale, on Blocks 8-11 of the east pediment of the Parthenon

suppose that these fragments are all in scale with one another and of precisely the size which their assumed place in the pediment demands, that they were found on the Acropolis, and in so far as they have been previously observed and recorded have always been classed among the fragments from the Parthenon pediments—shall I at last convince the reluctant?

I must leave the decision to the reader.

#### IV.

a. Through Dr. Max Wegner of the German Archaeological School my attention was drawn to a fragment of a marble statue (Fig. 11, *left*; Fig. 12) standing on the ground among miscellaneous blocks near the northwest corner of the Parthenon. Dr. Wegner had noticed a stylistic resemblance to the near-by Karyatides of the Erechtheum and had come to the conclusion that the fragment came from a statue of the same period. And actually if one of the Karyatides from the Maidens' Porch had been broken just above the knees, the remnant would strikingly resemble the marble fragment of which I am speaking. Pose and sculptural style are identical;<sup>1</sup> but the fragment is about 20% larger in scale and stands upon a plinth 0.09 m. high, worked in the same block as the statue. There was thus a clear possibility that we were dealing with a pedimental statue; and Herr Hermann Wagner pointed out that plinth and drapery of the statue were separated by deep horizontal bore-holes in precisely the same manner as statue U from the west pediment, which he had photographed for me for publication in *Hesperia* last year. A consultation made clear that the fragment must derive from one of the Parthenon pediments and it was agreed that Dr. Wegner, as the first on the field, should publish the statue in the *Athenische Mitteilungen*. If I repeat here any of Dr. Wegner's observations, it is only in the interest of keeping all the relevant material together.

There were other indications that the fragment was indeed derived from a pedimental statue. The back (Fig. 12) is far less weathered and eaten than the front; and though this might be an accident due to partial burial in the earth, it might also be an indication that the statue once stood with its back to a tympanon wall. Further, there are two square cuttings in the rear of the block. One is 0.06 m. deep, cut from two directions to make a right angle, and is *ca.* 0.05 m. high; while the second is 0.05 m. deep by 0.07 m. high. They are situated at different levels (0.39–0.44 m. and 0.47–0.54 m.) above the plinth. These cuttings could not have been intended to be seen and are therefore evidence that the statue was placed so as to hide the back from view. They

<sup>1</sup> Compare Fig. 11, *left* with Plate 95 in Hege-Rodenwaldt, *The Acropolis*.



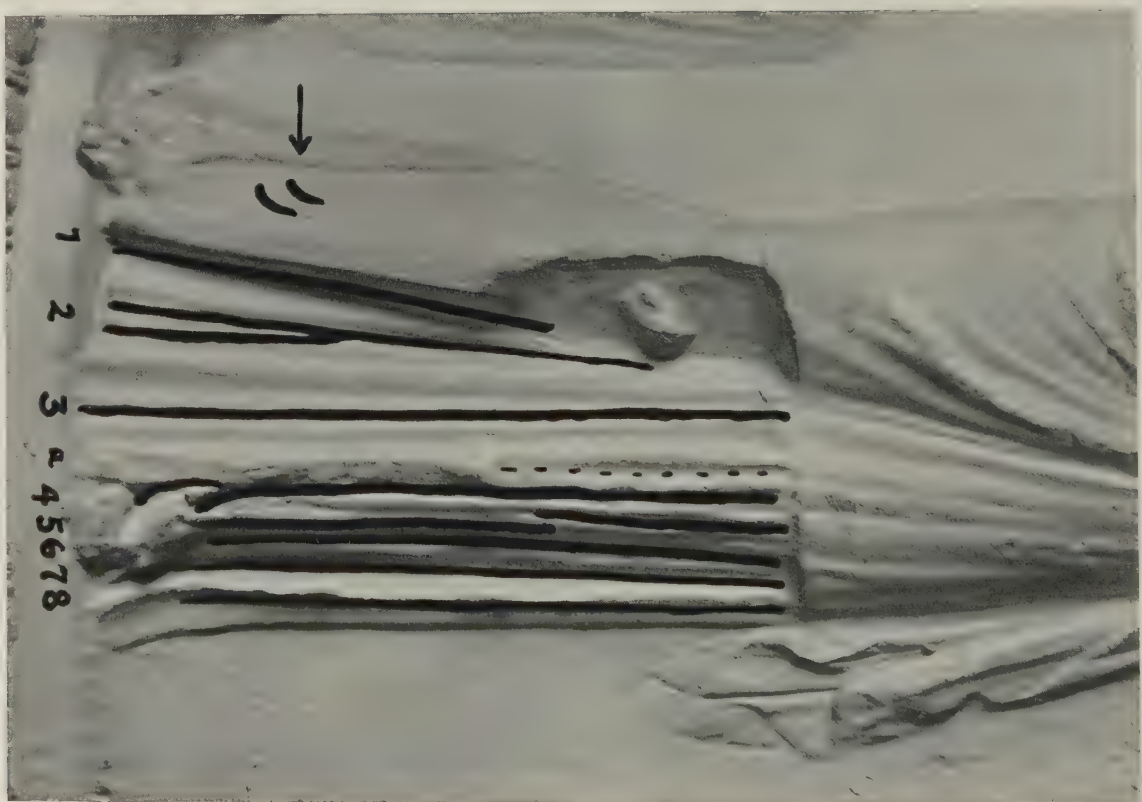


Fig. 11. *Left*, Fragmentary statue standing near the Parthenon. *Right*, Corresponding detail from the Madrid puteal



Fig. 12. Fragmentary statue standing near the Parthenon



were not made for lifting-tongs since they are not undercut, nor for dowels or pegs since they are not deep enough in proportion to the size of the openings. Presumably they were intended for wooden blocks under which ropes could be passed for hoisting the statue, whose columnar profile would not give any purchase to the ropes in the extant portion. An elevated position was therefore intended; and this could not have been an ordinary pedestal, since there is no dowel cutting in the underside of the plinth and there are no traces that the plinth was ever let into a base. The soffit of the plinth is carefully hammer-dressed, indicating that the statue was intended to stand upon a smooth surface or floor. All the technical indications accordingly point to a pedimental origin; and this is strongly confirmed by the great size of the figure, which is laid out at a scale approaching more nearly twice the normal human proportions. The sculptural execution is excellent; but the surface has been so abraded that it is only in the rear that it can be properly observed. The technical criteria, of prime importance for determining the date of execution, include (1) the absence of tool-marks on the finished surface, (2) a beautiful matt texture without lustre or polish, (3) the use of a drill, 0.008–0.010 m. in diameter, for horizontal perforations at the bottom of the drapery just above the plinth, (4) a scrupulous avoidance of monotony in the width of ridges and furrows in the course of their careers, and (5) a tendency to undercut furrows deeply to left and right, so that a cross-section of the furrow would exceed a half-circle. All of these characteristics point directly to the fifth century B.C.

But a large pedimental statue from that period, found on the Acropolis, can only come from the Parthenon; and as there is no such quietly erect and standing figure in the west pediment, our fragment must come from the east pediment. If its original height can be calculated, the exact location in the pediment can almost certainly be determined.

It is time to describe the fragment more fully. The greatest preserved height is 1.19 m.; but as all that remains is the lower part of a draped feminine figure broken off a little above the knees, this fragment is derived from a statue of very considerable size. The left leg is invisible beneath the stiff vertical folds of the chiton, though a slight curve at the bottom of one of the furrows indicates that the foot, now wholly broken away, once projected just above the plinth. The right leg, being the "free leg" of the pose, shows clearly at knee and calf and alone breaks the long play of vertical drapery lines which make the rest of the fragment resemble an irregularly fluted Doric column almost as much as a human figure. The similarity of pose and treatment to the Karyatid Maidens of the Erechtheum has already been emphasised. Though the right foot too has been broken off and the cap of the knee injured, the measurement from the top of the plinth, on which the sole of the sandal or shoe must have rested, to the curve behind the knee at the top of the calf of the leg, will give us the scale of the statue. On the Madrid puteal the second Fate, Lachesis, shows the same pose and the same arrangement of drapery, so that we may reasonably take comparative measurements. On this analogy we should multiply by three the height from plinth to knee in order to



arrive at the total height of the figure; and this calculation will give us 2.40 m. to which 0.09 m. should be added for the measured thickness of the plinth.<sup>1</sup>

Were such a statue to be placed in the east pediment, its height of *ca.* 2.50 m. would restrict its location very definitely to block 10 in the left wing and block 16 in the right. To both of these posts we have already assigned draped feminine standing statues: but there can be no hesitation in the choice between the two. For on block 10 stands the Lachesis of the Madrid puteal, and with the lower part of the figure of Lachesis our fragment agrees detail for detail and line for line.

The general theme of our fragment is extremely common in the fifth century, being fundamentally the Athena Parthenos motif of pose and drapery. In consequence, the exact identification of the fragment as the original prototype of the puteal Lachesis requires a more minute correspondence between the details than might be needed for a more unusual type. If photographs of the Acropolis fragment and of the corresponding portion of the puteal figure be reduced to the same size and set one beside the other as in Fig. 11, it will be seen that these do not constitute merely two specimens of vertical pendent drapery but rather a surprisingly exact identity of type. There are in each case eight principal furrows, three of which occur between the feet of the figure, while the fourth is disturbed at the bottom by the protrusion of the left foot. Between the third and fourth furrows there is a strongly marked ridge carrying a minor furrow; and beyond the eighth or last furrow there is a flat ridge which projects laterally and determines the profile of the statue. This lateral ridge has been broken off in the Acropolis statue; but its traces are clearly visible in a flat break 0.05 m. wide which stretches all the way from top to bottom. At the other side of the figure, the strongly curved contour of the right calf gives an equally unmistakable profile.

It is interesting that the maker of the Tegel relief did not take the trouble to follow these perhaps unimpressive details of the drapery in the lower part of the figure but merely introduced a multiplicity of vertical lines to give the general effect. We shall see very shortly that in another part of the same figure the artist of the Tegel relief has followed his prototype with remarkable fidelity. We may not therefore immediately conclude that the Madrid puteal is a more accurate version than the Tegel plaque.

By identifying the extreme furrows at left and right, it is easy to calculate how much of the Acropolis fragment has been broken away. On our right, beyond the statue's missing left foot, there is lacking only the laterally protruding ridge which has just been mentioned as forming the silhouette for the frontal view; and this is a matter of only 0.04–0.05 m. On our left, the whole of the right foot and the projecting drapery have been broken away; so that the marble block must have projected at plinth level some 0.20 m. beyond the existing contour of the calf. The fragment is 0.74 m. wide at this level. Thus the complete statue must have had a width of almost exactly one

<sup>1</sup> If we take the Karyatides of the Erechtheum for canon, we shall reach a rather taller result; but the Erechtheum Maidens have columnar rather than sculptural or human proportions.

metre. The thickness, or pedimental depth, may be directly measured at plinth level as 0.37 m. plus the projection of the feet; so that the statue at floor level could not have been much more than half as deep as the pediment itself. Above the plinth the marble block slowly widens out, until at the level of the knees it measures 0.51 m. from front to back. To judge from the puteal Lachesis, the lateral dimension must have increased even more considerably to include the pendent ends of himation at the left thigh and, still higher, the projection of the arms and hands toward this same side of the body.

It is doubtful whether it is necessary to accept the evidence of the puteal version quite literally for all these details, since we are entitled to consider this a profile rendering in relief from a plastically more complicated pose. The carvers of reliefs drew their figures first upon the slab of stone and naturally tended to avoid difficult and troublesome foreshortenings in their drawings. In the restoration of the pediment it will always be permissible to turn the arms of Lachesis more directly forward toward the spectator and thereby to diminish the vacant space between the plinths of the two standing figures. As both were carried on the same floor-bar, this economy of space may prove to be a valuable consideration. But the general principle (that a relief throws into profile the plastic foreshortenings of a prototype in the round) has a wider application to other figures on the puteal and in general to any relief version of any statue in the pediment.

The fractures of our Acropolis fragment seem to preclude any possibility of continuing the comparison with the puteal Lachesis beyond the straight folds of the chiton; yet actually these very fractures may be made to yield some precious indications. A marble block falling from a height inevitably tends both to break away any strongly salient projection and to snap itself across at its narrowest section. We may therefore conclude from the type and position of the breaks in the Acropolis fragment that (1) both feet projected from beneath the drapery, but the right foot much more markedly than the left, and (2) the width of the statue increased just above the knees sufficiently to make this the "waist" or "neck" of the block, as would be the case if the overhanging himation replaced the narrower chiton at this point. It is therefore no mere coincidence nor even an unfortunate fatality that the surface of our fragment ceases at exactly the height where in the puteal Lachesis the himation commences. Rather, the occurrence of an upward slanting fracture at this level establishes a corresponding change in the drapery here; and this conclusion is confirmed by the observation that many of the vertical furrows of the chiton begin to die out by growing thinner and shallower as they approach the line of fracture,—as though they could not continue any higher, but were to be replaced by some other motif. The rear of the block shows a diagonally rising break, from which it is to be inferred that the himation did not pass around the figure at the same level as in front, but was hung from the left shoulder, toward which it ascended in a sloping line across the back.

If we plot the restored plinth of our statue and try to fit it on the pediment floor the right foot must obviously be set along the pronounced bedding line in the north of block 9 (Plate II). The southward jog at the rear of this bed agrees precisely with the

conspicuous flare of drapery behind the foot, which is broken away in the original fragment but is very clear in the puteal and Tegel versions. Hence the Klotho cannot extend further north than this jog and the two statues must almost touch plinth to plinth, exactly as they do in the reliefs. But further, the bedding line does not run exactly at right angles to the tympanon but slants outward slightly toward the right or north. We should not therefore set the statue quite frontally, but rather with a slight turn, bringing the left foot further back in the pediment than the right. This orientation is exactly confirmed by the observation that the rounding of the right calf with the conspicuous contour noticeable in the reliefs comes into view only when this slight turn is given to the figure,—an arrangement which is perfectly feasible because the statue is considerably narrower than the pediment shelf, and is actually demanded by the consideration that with two adjacent statues resting on the same slanting floor-bar (p. 29) the left-hand statue must extend close to the tympanon in order to take advantage of the slant of the bar. How the statue was fixed upon the bar, whether with a level plinth or with a slot to key over the bar's projection above the floor, remains unknown because the end of the plinth is broken away.



Fig. 13. Distortions of pedimental figures in a frieze

If our conclusions are correct and the statue was not set frontally but with a slight turn inward toward the tympanon, the figure should appear slightly foreshortened on the puteal and be a little too narrow in proportion to its height as compared with the original fragment. This is actually the case, as we have already remarked; but in addition, even after allowance is made for such foreshortening, the relief versions seem to have been made somewhat more slender. The discrepancy may be explained as due to a neo-Attic taste for slenderer proportions, but is more probably the result of the process of converting statues of unequal size in the pediment into figures of a uniform height on the frieze-like reliefs. Unless the smaller figures were reduced laterally, they would naturally occupy a disproportionately broad area and alter the spacing of the general composition, as the geometrical diagram, Fig. 13, will show. The sole objection visible in Fig. 10 is now removed. In a reconstruction made by purely mechanical enlargement from the puteal figures, the Lachesis will not be quite broad enough to reach from the edge of the bedding in block 9 to the iron floor-bar in block 10. But if we substitute the original Acropolis fragment, we shall discover that it exactly fits the requirements (Plate II).

b. There is in the Acropolis Museum a marble foot (Catalogue No. 953) listed among the fragments from the Parthenon pediments and described in Casson's catalogue as a



"right female foot wearing a sandal, with part of the ground and a margin of drapery" (Fig. 14). In size, pose, and drapery indications this is precisely suitable for the foot which we must assume to have been broken away from the large Lachesis fragment. As in the puteal version, the hanging chiton spreads out over the arch, descending on the inside between instep and heel, where a projection in the marble shows that the drapery swung out again at right angles to the foot. Sandal sole and statue plinth are differentiated; but the latter is too broken to tell us exactly the tilt or angle with the ground. Such a foot might belong to any feminine figure about two and a half metres

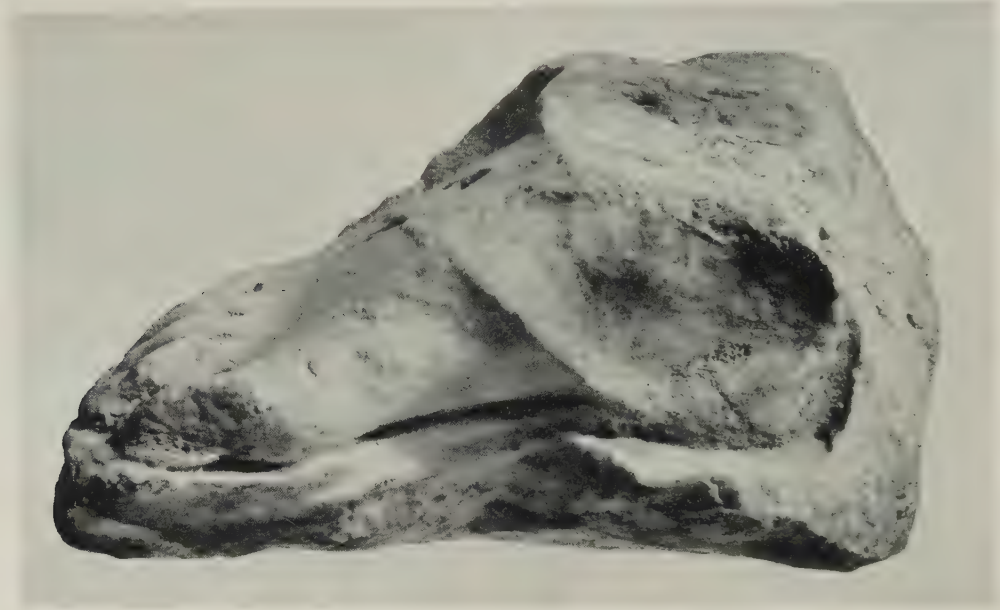


Fig. 14. Acropolis Museum. Parthenon Fragment 953

high dressed in drapery reaching to the ground; but to judge from Carrey's drawing there is no appropriate figure in the west pediment, while in our restoration of the east pediment there is no precisely suitable figure except Lachesis. In view of our knowledge that the right foot of Lachesis has been broken away and hence, if it survived at all, must have survived as an isolated fragment, the ascription of 953 to Lachesis seems justified, even though the marble is too shattered to show any actual join with the major fragment.

c. Among the same series of Parthenon fragments collected in the Acropolis Museum there is another (Fig. 15) listed under the catalogue number 930, which represents the right waist of a female figure clad in a thin transparent chiton, girt just beneath the breast by a small round cord, and a himation which descends behind from the direction of the left shoulder and in front is gathered together below the waist in heavy parallel

fold. There is no reason to doubt the current ascription to the Parthenon pediments; but in that case, the scale is so precisely right and the pertinent details agree so exactly with the Lachesis of the Tegel relief (Fig. 8) that the fragment must be part of the



Fig. 15. Acropolis Museum. Parthenon Fragment 930

same original whose lower portion has just been identified. Fig. 16 shows how accurately fragment 930 fits into place when drawn to the same scale as this larger piece. It is interesting that the high girdling, which has been urged as a proof that the puteal

Fates cannot derive from an original as early in date as the Parthenon, shows clearly in the upper right corner of the fragment. The modelling, with its diaphanous rendering of the narrowed waist and the beginning of the rise of the breast, together with the seemingly simple but actually complicated movement of all the ridges and furrows,

gives promise of a much more interesting statue than the comparatively monotonous lower range of the garment in the larger piece. A very astonishing parallel to 930 occurs in the well-known Themis by Chairestratos from Rhamnus (Fig. 22), a parallel which will be discussed and utilised a little later in this study.

It is very probable that there are other pieces of the same statue still to be found, since (as shown by the broken floor-block 10 on which it once stood), it must have fallen headlong from its place in the pediment. Since so many pieces have survived, the shattered fragments must have lain unheeded on the ground until they were safely buried by the accumulating earth. But I venture only one other ascription:

*d.* In the *Journal of Hellenic Studies* for 1911 (pp. 65–71) Six made out an excellent case for considering the fragment of a head in Stockholm (Fig. 17) locally nicknamed “Deianeira,” as a survivor from one of the Parthenon pediments. His characteristically acute sense for style and chronology allowed him to recognise a Parthenon original in so unexpected a place. By comparison with the Laborde head in Paris, Six concluded that it was “a trifle smaller” (according to his calculation, by about 3%). Sauer had already estimated at 2.31–2.64 m. the height of the lost figure to which the Laborde head had belonged. On this analogy, “Deianeira” should have measured



Fig. 16

2.24–2.56 m. without the plinth, or, taking the mean of this range, 2.40 m. These are not my calculations, but those of Six and Sauer. Yet 2.40 m. is precisely the height of Lachesis.

Six argued that an ear-ring in the left ear indicated that the head must have originally faced full-front or “have shown its left side in the right half of the composition.” The head was carried erect on the neck and without torsion; and this detail tells strongly in favor of a full-front position, since a statue throughout in profile does





Fig. 17. Head in Stockholm National Museum, much restored

not occur in the Parthenon pediments, being contrary to the tradition of combining profile heads with torsoes more frontally turned for greater breadth and clarity of style. Six detected, however, a slight forward inclination. In exact agreement with all these observations, the Lachesis on the puteal and the Tegel versions stands with head fully frontal and neck erect, with a slight downward tilt of the chin.

No head in Carrey's drawing of the west pediment is a very logical candidate for the "Deianeira," with the possible exception of Q, and strictly, even Q is dubious, being nearly 10% smaller in scale than the presumed "Deianeira." The chances are thus overwhelmingly in favour of derivation from the east pediment. But the size of the head (0.32 m. from chin to crown) confines it to an intermediate position between the

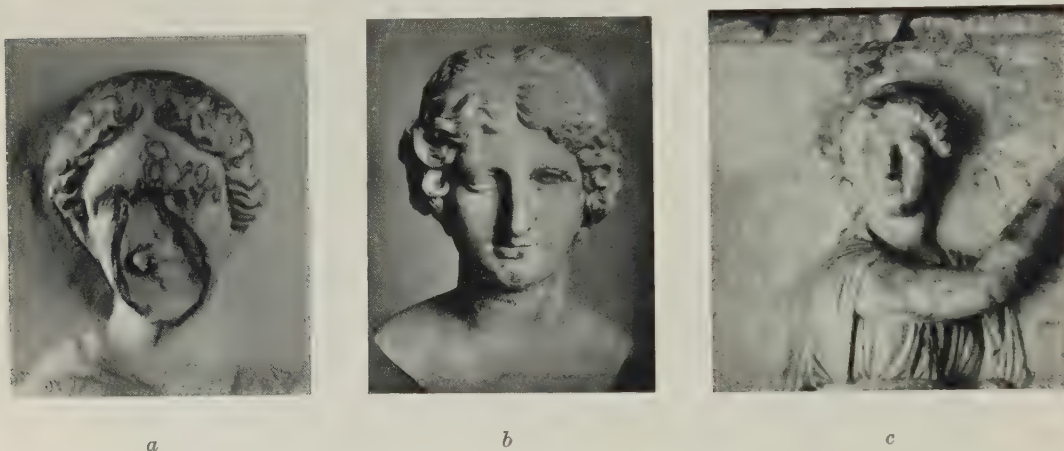


Fig. 18. *a*, Lachesis of Madrid Puteal; *b*, Stockholm "Deianeira"; *c*, Lachesis of Tegel Relief

colossal central figures and the much smaller wing figures, so that "Deianeira" must be one of the three Fates or else the standing goddess between "Apollo" and the god of Torso H in the opposite wing. With the choice so restricted, a striking similarity with any one of these four seems conclusive. And when the "Deianeira" head is set side by side with the injured but not illegible head of Lachesis from the puteal and the small but vivid head on the Tegel relief as in Fig. 18, not merely the carriage and pose of the head but the actual details of hair, forehead, and eyes constitute as perfect an analogy as such a comparison could possibly hope to yield. The only discernible difference from the puteal head is a greater roundness in the facial contour of the "Deianeira"; and this may be due to the general tendency of the neo-Attic copyist to elongate his forms, especially as the narrow face does not seem to be "Pheidian" or fifth century, or else may be merely due to the necessity for making the whole figure thinner and slenderer to overcome the lateral deformations explained in the diagram in Fig. 13. With the Tegel plaque, in spite of its smaller size, the comparison is at least

equally satisfactory. I conclude accordingly that, if one can agree with Six's identification of the "Deianeira" head in Stockholm as a Parthenon original,<sup>1</sup> there is every reason for assigning it together with the three other fragments to the statue of Lachesis.

The Weber-Laborde head in Paris has been finely published by Sauer in a monograph in which he has shown the correctness of the current opinion that the head is derived from one of the pediments of the Parthenon. Maintaining that there is no figure in Carrey's drawing of the west pediment with which the Laborde head can be appropriately connected, Sauer necessarily championed a derivation from the east pediment. He calculated the height of the statue to which such a head should belong and by the canons of fifth-century Attic sculpture decided upon 2.31 m. as minimum and 2.64 m. as maximum. If we confine ourselves to the canon of the Parthenon frieze as given in Sauer's table on pp. 196-197 of his monograph, where the total height ranges from 6.8 to 7.5 times the height of the head from chin to crown, with the preponderance in favor of ratios between 7.2 and 7.4, we may narrow the limits to 2.37-2.44 m. Such a statue, with a plinth of 0.10 m. and sufficient room between head and cornice, belongs on blocks 10-11 or 15-16, or in other words to the third Fate "Aisa" or to the goddess standing in front of "Apollo"; and as the Laborde head bears a startling resemblance to the third Fate on the puteal and on the Tegel plaque (Fig. 19), the identification should be automatically established.

Yet the matter is not quite so simple because of a wholly misleading argument advanced by Sauer, with which I fear that I must utterly disagree. On the basis of a cutting behind the crown of the Laborde head, Sauer inferred that this mutilation was an ancient incision made in order to fit the head under the drip of the overhanging cornice. We are to presume that, though the gable height had been correctly calculated, the sculptors had failed to take into account the downward curve of the cornice drip at the front of the pediment, and as they wished to set the statue with its head projecting in front of the pedimental frame (so Sauer argued), there was nothing else to do except to cut off a piece from the back of the head to accommodate the cornice. Sauer's accompanying drawing is really the refutation of the entire theory. Inspection shows that, while the cornice drip forms a very thin and sharp angle, the cutting in the head is of quite another shape, being a broad open shelf with an oblique slanting wall at 140°. One of the horses of the Moon from the extreme right wing of the pediment, to which Sauer appealed for a parallel, has been cut to fit the overhang-

<sup>1</sup> Lennart Kjellberg's strictures in *Röm. Mitt.* 1912, pp. 94-96, concentrated on a lack of motion and a lack of freshness and vigor. The former is precisely characteristic of the Lachesis of the reliefs; the latter would be inexcusable in a Parthenon original. I have not yet seen the head and know nothing of its detail at first-hand. Even though Kjellberg believed the head to be a copy, he assigned its prototype directly to Pheidias. It would seem therefore that the hypothesis of its connection with the Parthenon pediment remains highly credible.



ing cornice edge; but here, though rather roughly chiselled, there is still a perfectly recognisable negative impression of the cornice profile with its vertical wall toward the outer side, the blunt edge of the actual drip at the bottom, and the slow rising curve of the cornice soffit toward the tympanon. The cutting in the Laborde head bears no resemblance to such a profile.

We have already asserted that there is no justification for thinking that the statues projected outside the pediment frame. This is especially applicable to the colossal central statues whose weight on the cantilevered floor-blocks became tremendously more dangerous the further forward they projected. Can we possibly believe with Sauer that any figure stretched its head out into the rain some 0.25 m. beyond the cornice in order to "look past her neighbor" and see "what is happening in the centre of the pediment"?

It is not necessary to explain the cutting in the back of the head. The poor fragment has had such a history of vicissitude that anything might have happened to it. Many plausible explanations for the mutilation might be advanced, including the obvious one that the head is on record as having been built into a wall of a house in Venice:<sup>1</sup> it is sufficient to know that the one explanation which cannot be true is Sauer's.

Therewith also, and alas, vanishes the crucial indication for determining the original orientation of the head. Since the cutting means nothing, we are left in doubt how the head should be turned and fitted in the pediment. Our only clue is the greater damage from weather to the right half, from which we may infer (as many scholars have already done) that the head faced in profile toward the spectator's right. We are left with the estimated height of the statue (2.35–2.50 m. if standing, 1.90–2.05 m. if seated) as the only reliable evidence for its original position.

Were the head a survival from the *west* pediment (by far the most likely assumption, since so many of the heads are shown still extant in Carrey's drawing of that end of the Parthenon, to which the Venetian plundering seems to have been confined, the east pediment being inaccessible) there are only five figures of adequate size—G, H, N, O, and the reclining figure T. Of these, H is male, while the Laborde head is certainly feminine; and the torsoes of N and O have both been preserved, and the Laborde head will apparently not fit either of them.<sup>2</sup> T is eliminated because its head had already lost the face by Carrey's day, while the Laborde head has only the nose and lips broken away. Finally G is impossible because in Carrey's drawing it is set at a wholly different angle on the neck. Thus the conclusion reached by Sauer from other (and I believe, inadequate) premises seems confirmed: the Laborde head comes from the east pediment. We have already seen that it agrees with only one of our restored statues, the third Fate, Aisa; but with this it agrees precisely in every visible and distinguishable detail.

<sup>1</sup> Sauer, *Der Weber-Laborde'sche Kopf*, p. 4.

<sup>2</sup> In view of the striking resemblance to Carrey's version, the "Iris," long assigned to the east pediment, seems surely to be N of the west pediment, especially now that our reconstruction shows that there is no room for such a figure in the east.

The third Fate stood, as we have seen, on block 11 with one foot on the double bar at the joint between blocks 11 and 10. The weight of the figure is set well back, with the result that the crown of the head comes over the northernmost end of the bar. The cornice height at this point is 2.85 m. above the pediment floor, allowing some 2.65 m. available for the statue above its plinth. If our calculations have suggested 2.37–2.44 m. as most probably the correct height, we need not take refuge in Sauer's more liberal range of 2.31–2.64 m., but conclude rather that the headroom was taken a little more generously for this statue in order to keep the figure more closely on the same scale as her companion, Lachesis. This latter statue has already been estimated at 2.40–2.50 m., with its head fairly close to the cornice. Aisa, on the contrary, with head height of

*a**b**c**d*

Fig. 19. *a*, Nemesis from Rhamnus; *b*, Weber-Laborde head; *c*, Aisa of Madrid Puteal; *d*, Aisa of Tegel Relief

2.47–2.54 m. above the floor, is only negligibly taller than Lachesis in spite of the fact that the sloping cornice has risen some 0.20 m. between the two statues. These conclusions depend on Six's measurement of the "Deianeira" (Lachesis) head at 0.32 m. and Sauer's measurement of the Laborde head at 0.33 m. from chin to crown. If the heads thus differ by only 3%, the stature of the whole figures should differ by only 0.075 m. And this agrees with the esthetic consideration that it would scarcely be possible to set such a sister pair as these two Fates standing side by side except by keeping them to approximately the same size.

It is now suddenly clear why Six found the closest stylistic analogies for the "Deianeira" in the Laborde head. He had no way of suspecting that the two heads came from adjoining statues in the pediment; but we, knowing this, can scarcely be surprised if they resemble each other so closely—not so much because they are sister Fates as because adjoining statues may very plausibly be considered to be the work of the same sculptor. Who this sculptor was, may be asserted with considerable confidence.

## V.

The clue comes from the sculpture found in the temple precinct at Rhamnus in Attica. In his excellent and too little appreciated *Studien zu den attischen Reliefs*, Ernst Kjellberg writes (p. 105):—

“Unter den attischen Originalen des fünften Jahrhunderts nehmen die Fragmente von der Basis der Nemesis aus Rhamnus einen hervorragenden Platz ein. Der Name des Meisters Agorakritos kann als gesichert gelten, da dessen Signatur ausdrücklich bezeugt ist. Die dagegen streitende Version von der Urheberschaft des Pheidias findet in der



Fig. 20. Left, Klotho of Tegel Relief; Right, from Basis of Nemesis of Rhamnus (209)

ihretwegen erfundenen Erzählung von dem Liebesverhältnis zwischen dem großen Lehrer und seinem Schüler keine wirkliche Stütze. Diese Basisfragmente sowie das Bruchstück von der Statue selbst, das jetzt in London aufbewahrt wird, sind somit eine der seltenen Ausnahmen von der Regel, daß die erhaltenen Originale von uns unbekannten Künstlern stammen, während die Werke der namhaften Meister verschollen oder im glücklichsten Falle in Kopien auf uns gekommen sind.”

To this dictum I imagine that there is at present almost universal assent. The fragments from the basis of the great cult-statue of Nemesis are works of most exquisite artisanship, deserving to be known and studied by everyone who professes an interest in the actual sculpture of classical times as opposed to the classical versions of the copyists. Of the statue which once occupied the basis from which these miniatures in high relief must derive, there is only the British Museum fragment referred to by Kjellberg and illustrated here in Fig. 19a. The right cheek, eye, and ear, together with the hair over temple and crown are quite well preserved. Set side by side with the head of the Fate Aisa (the Laborde head), a general similarity is at once apparent. Among the fragments of the basis reliefs, now in the Athens National Museum, No. 209 is extra-



ordinarily similar to the comparable detail from the Klotho of the Tegel plaque (Fig. 20), while Nos. 208 and 211 (Fig. 21, *left*) resemble Lachesis and another (Fig. 21, *right*) is stylistically allied to Aisa. Thus all three Fates are in the style of the master of the Nemesis basis, who can only be Agorakritos.

But the conclusive parallel is a little more indirect.



Fig. 21. Fragments from Basis of Nemesis of Rhamnus

Kjellberg has shown that the little votive statue of Lysikleides from Rhamnus was directly inspired by the figures of the statue-base, from two of which it is copied almost line for line. Yet the workmanship is indifferent, particularly when compared with the gem-like sharpness and brilliance of the prototype, so that it is not reasonable to see in the Lysikleides dedication anything but a local product of a minor master. I wish to advance a similar suggestion for the famous statue of Themis by Chairestratos of Rhamnus, found in the smaller of the two temples. The letters of the inscription prove that the

statue was carved and dedicated in the third century B.C. I confess that it was not until I began to be a little more familiar with third-century styles and undoubted third-century originals that I realised that the famous Themis cannot by any human possibility be an original third-century creation, but must be a direct copy from a late-fifth-century masterpiece. The hand of the copyist is very clear in the lifeless and mechanical furrows, especially of the chiton and the girdle-like fold of the himation, where the undeviating width and straight walls of the cuttings are an unmistakable indication. Yet the pose, the proportions, and the drapery with its unbroken run of line and geometrical harmony of curves is equally unmistakable as fifth-century of the Pheidias school. The high girdle



Fig. 22. Themis by Chairestratos of Rhamnus (Athens, National Museum)

has been wrongly used as an argument for a later date; but our fragment of Lachesis had precisely this girdling. Indeed a comparison of this fragment (Fig. 15) which, be it remembered, has always been known as an original from the Parthenon pediments, with the comparable portion of the Themis of Chairestratos (Fig. 22, *left*) shows such a surprising similarity that the second might almost be a direct copy of the first. Even the absolute size is practically identical. And the Themis head in profile (Fig. 22, *right*) might be the third Fate of the puteal! (Fig. 19, *d*).

There is only one explanation possible: Chairestratos the Rhamnusian of the third century B.C. made his Themis by copying slavishly and directly the cult-statue of Nemesis by Agorakritos, probably altering little more than the attributes in the hands and the famous diadem on the head, whose omission explains the curious vertically brushed hair on the Themis that seems to be growing over some concealed headband or *polos*. It is

not certain whether the statue of Themis was a votive dedication or a cult-image. As it is debatable whether there was ever a separate temple to Themis at Rhamnus and whether the personality of Themis was more than a double or by-name of Nemesis, there need never have been a cult-statue of Themis until Chairestratos' time. There is consequently nothing inherently surprising in the assumption that a local third-century craftsman should have taken the inspiration for his commission directly from the famous Nemesis, the pride and distinction of his little town. But if Chairestratos unconsciously reproduced with such startling exactness the style of the Lachesis and Aisa of the Parthenon east pediment while intending merely to copy the Nemesis of Agorakritos at Rhamnus, we can only conclude that the Lachesis and Aisa must be the work of Agorakritos, who immediately becomes even more than Kjellberg ventured to assert, *the only great fifth-century master whose original work we can identify indubitably*. The Laborde head becomes the Louvre's counter-treasure to the British Museum fragment of Nemesis.

A rather striking comparison suggested that Agorakritos was also the sculptor of the seated Klotho. Did he possibly have a hand in the striding Hephaistos or any of the other figures from the lacuna? Nothing short of identifiable fragments from the original statues can bring us a reply. But I am tempted into venturing the purely personal opinion that none of the "Elgin marbles" of this pediment are from his hand, so that the east pediment cannot all be the work of a single man,—a conclusion already reached on excellent grounds by Kjellberg. And if he whom tradition knew as the favorite pupil of Pheidias made the statues close to the pediment centre, and if that pediment centre itself showed a theme for which Pheidias was either already famous or (more probably) which he was to repeat in even greater style for Olympia,<sup>1</sup> it is possible that the seated Zeus, the Hephaistos, and the Athena were the work of the Master himself. It is possible, I am not sure that it is not even thoroughly plausible; but it is not proved, and probably never can be proved. In any case, the Zeus of the east pediment seems to have become as popular among the minor ateliers of Athens as the great chryselephantine Zeus at Olympia was among the public at large; for the figure is copied again and again on Attic reliefs. In the National Museum at Athens one will encounter this Zeus of the pediment on the reliefs numbered 1405, 1408, and 1431 (E—A. 1245—7) in his proper guise, and rather less frequently on reliefs from the Asklepieion on the south slope of the Acropolis as the healing god Asklepios (e.g. E—A. 1228), where he seems to replace the cult-statue by Thrasymedes so usual on the reliefs in Epidauros. I include as a highly interesting version from Roman times a hitherto unpublished relief (Fig. 23) from the Asklepieion of Corinth, discovered by Dr. F. J. de Waele in 1931 in the course of the excavations of the American School. Here the god is in his proper guise, with a divinity behind him whose gesture is appropriate to Hera.

<sup>1</sup> Noack in his monumental *Eleusis* (p. 198) pointed out that the architectural use of the blue Eleusinian limestone is an indication of a post-Parthenon date, since the Propylaia and the Erechtheum employ it while the Parthenon does not, and observed that its importance in the chromatic scheme of the Zeus at Olympia is accordingly a very strong indication that this statue is later in date than the Athena Parthenos.



It is very tempting to see in the Zeus of the pediment the immediate forerunner or the direct echo of the cult-statue of the temple at Olympia; but the question of Pheidias authorship cannot be put to the final test because there seems to be no probability that any portion of the central figure of the Parthenon pediment has survived. The piece of carved drapery which Prandtl interpreted in the *Athenische Mitteilungen* for 1908 as part



Fig. 23. Relief from the Asklepieion of Corinth

of the raised left arm of the throned Zeus may be correct in scale, but is not in style. The plastic complexity of the drapery contours, with their interpenetration of solid forms as opposed to the purely linear manner of classic Greek periods, and the technique of execution with straight walls to the furrows and rasp strokes across the ridges, date the fragment as early Imperial Roman. It may come from the colossal statue of Augustus in the round monument of Roma and Augustus immediately in front of the Parthenon; otherwise it must be a survival from some similar imperial memorial on the Acropolis. The hand cut to hold a staff, illustrated in the same article by Prandtl, being only a little larger in scale than the reclining Dionysos (D), is much too small for the Zeus, whose actual size may be considered as established within rather narrow limits.

It is more probable that the Zeus was deliberately and completely destroyed at the time that a window was cut in the tympanon to light the apse of the church of St. Sophia into which the Parthenon had been converted. On block 14, behind the front line of the tympanon, near the south edge of the block and centred 0.60 m. north of the exact axis of the pediment, there is a roughly finished but quite accurately round cutting, 0.25 m. in diameter, with a round hole in the centre for a dowel peg. This can only be the bedding for a small unfluted early-Christian column which probably marked the centre of a window cut through the right-hand central orthostate of the tympanon. As such a window would have been completely blocked by the statue of Zeus, it is only reasonable to assume that the statue was removed at the time. The Athena could have been left undisturbed by this operation; but it is more probable that she paid the penalty of her intimate connection with her father.

We have no evidence for the disappearance of the three statues to the left or the four to the right of the central group. When the Flemish artist whom for convenience we identify with Carrey made his drawings in 1674, the great gap was already there. The tympanon wall was preserved on either side of the gap for a short distance further toward the centre; and as this would have afforded a certain amount of shelter from wind and rain, the better preservation of the floor-marks on blocks 9-10 and 18 is possibly thus to be explained. But it is more reasonable to assume that the statues on these particular blocks remained in place longer than those nearer the centre, whose early disappearance led inevitably to the almost total effacement of the original surfaces on which they stood. Lachesis clearly tumbled from place, since the floor-block has been snapped off in its entire overhang, and the iron floor-bar was powerless to save the statue because it passed only under one corner of it. This accident seems to have been more beneficent than any deliberate removal (as the latter led only to complete destruction by human agency), and explains why so many fragments of this one particular figure have survived into our time.

Failure to find any actual remains of the longer-lost central figures will not serve as an argument against the authority of the Madrid puteal. Now that actual fragments of Lachesis and Aisa exist, the other figures follow almost automatically, since no one will have the hardihood to reverse the previous state of affairs and, instead of accepting the Zeus and Athena and rejecting the Fates, accept the Fates and reject the Zeus and Athena! On the contrary, there is every reason to insist that we are adequately and even fully informed on the first seven statues of the lacuna, inasmuch as their exact likeness has for years confronted us on the neo-Attic altar which we are in the habit of calling the Madrid puteal. Since the recent discovery in Peiraeus harbour of neo-Attic relief plaques copying figures from the shield of the chryselephantine Athena Parthenos, arranged in groups of two to each plaque, we cannot profess surprise that the Tegel plaque should show three consecutive figures from the pediment of the Parthenon arranged as a miniature frieze, or that a whole series, beginning with these same three figures and continuing through the centre of the pediment, should have been selected

by the neo-Attic ateliers for such an attractive *objet de commerce* as a round altar adorned with a running frieze. Nor can we find it in the least unnatural that the artist should have selected precisely the sequence from Klotho through Athena, since these are the seven figures of the pediment which illustrate the legend, all others being mere spectators and accessories to the scene.

Can we venture to hope for still further favours from the ancient copyists? For the reason just given, it is unreasonable to expect a different excerpt from the pediment, revealing the other attendant figures in their full sequence. At most we might expect chance groups or combinations in which these accessory figures have been used. There are still four statues to be discovered before the lacuna can be filled; but fortunately, to guide us in our search, we can supply fairly full descriptions of all the missing characters.

First, immediately after Athena, there is the semi-draped god whose torso has survived in the fragment H. He rests his weight on his left foot, holds a staff in his right hand, and is turned in three-quarter or profile view. There can be little doubt that he is Poseidon,—especially if we compare his torso with that of the Poseidon of the west pediment. In both there is the reflection of that gigantic power which is not the supple strength of the trained athlete but the vast and uncontrolled force of nature. Beyond Poseidon stands a draped goddess of whom no further details are available. It is an obvious guess that she should be Hera; but she may almost equally well be Artemis, because immediately beyond her sits a half-nude god who is more likely to be Apollo than Ares. Last of all we seek Hermes, who should not be absent from this Olympian assembly even if he be bent on departing from it as rapidly as he can. He moves toward the right, close upon the seated figure whom we know so well in the British Museum, the first of those "Three Sisters" whom we can no longer call Fates, since we have found the true birth-Fates elsewhere, and probably should not call sisters.

These are the available descriptions of the missing characters. Were they in frequent and familiar service among the ancient copyists and the uninventive makers of second-rate reliefs? There can scarcely be any doubt that they were. But how shall we be certain of them when we meet them? If the hunt is up, the reader must be patient while riding to the hounds on such a chase. For, inevitably, it leads through strange cover.

## VI.

Our search begins with a study of the "Mantineia Basis" in the National Museum at Athens.

These three carved slabs (cf. Fig. 24), manifestly derived from the facing of a statue base, were admirably published and elaborately discussed by Amelung in 1895 in his monograph *die Basis des Praxiteles aus Mantineia* which still remains a classic of archaeo-



logical method. It is, however, an interesting comment on the stage of development in archaeological research forty years ago that the great master of sculptural typology should have dismissed as impossible the claim that the figures on the Madrid puteal were Pheidian in style and fifth-century in origin. This question was a vital one for the Mantinea basis; for Amelung was quick to see that, typologically, basis and puteal were closely related. The more intensively trained students of to-day will not demand a second monograph to persuade them that the two monuments stylistically cannot be



Fig. 24. The Mantinea Basis re-arranged

contemporary, but that the puteal figures hark back to a style which is two generations earlier than the Praxiteleanised Muses on the basis. On the puteal every drapery line is continuous and geometrically related to its neighbor: on the basis the lines have become discontinuous and episodic, more interested in the realistic rendering of cloth than in the abstract modelling of the plastic appearance. On the puteal the heads are monumentally large, with clear simple features and linear hair-forms: on the basis the heads are small, the features delicate, the hair-forms decorative. Greatness and dignity of style have yielded to prettiness, grace, and elegance. The puteal, though the later in actual date, is thus the earlier in sculptural content. We have shown it to be a faithful reduced copy of seven of the chief statues of the Parthenon east pediment. If the Mantinea basis possesses any similarity to the puteal, what is its relation to the pediment?

The more obvious similarities between basis and puteal are confined to the Muses of the basis and the Fates of the puteal. Klotho has resigned her distaff and spindle and

taken up a mandolin; she has turned herself a trifle more frontally on her throne, and adopted a new elegance of dress. Lachesis now holds a pair of flutes instead of the three lots; she has allowed her himation to hang below her knees and wrapped it a little more closely around her shoulders; but otherwise hardly a line has been changed. Even more strikingly, the third Fate, Atropos or "Aisa," is literally reproduced, detail for detail, as Amelung recognised. All the heads are new; they echo the Praxitelean fashions and have nothing in common with the Pheidian school. But the poses and the general cast of the figures remain unmistakably the same. Another Muse, between Klotho of the mandolin and Lachesis of the flutes, proves on close inspection to be only Lachesis over again, with arms and hands muffled in her himation in such an un-Pheidian manner that her identity escaped our first glances. There remain two more Muses; and these are both taken from a single prototype, but this time from a prototype unknown to us. Finally, on the third slab are a seated Apollo, a Scythian slave, and an agonisedly fluting Marsyas. Amelung could not find any parallel for this last figure and was forced to consider it "*unmittelbar für das Relief erfunden*,"—like the mandolin player, whose connection with Klotho of the puteal had escaped him or not appealed to him.<sup>1</sup> But surely, this strange and ungainly Marsyas is an old friend, Hephaistos, reversed and fitted with flutes instead of his axe. The striding pose of the legs is perhaps the best, because most vivid, thing in the whole work; but this was plagiarist's luck rather than artist's genius. And the crooked raised arm seems better suited to carry some large object than to rule the stops of a pipe. The re-cutting of the shoulder, which Amelung noticed, bears further witness to the difficulty of adapting the original type to so inappropriate and unrelated a theme. And the Apollo, if we reverse him, is precisely right (Fig. 25) to become the seated statue on blocks 17–18 of the pediment, except that he wears too many clothes. Perhaps that is why he plucks so awkwardly<sup>2</sup> at the fold of drapery on his thigh, which alone should be a true remnant of the meagre garment of his prototype. And another very minor peculiarity may be significant. The seated Muse places both her feet upon a shelf-like projection of her rocky throne, which clearly echoes the plinth of her Parthenon prototype, Klotho; but the Apollo has one foot tilted back on some invisible shelf of his throne and the other foot placidly advanced in air without visible support. In the course of our investigations of the floor-marks for the seated statue on blocks 17–18, we were forced to conclude that the foot which was set forward must have been quite detached from the throne, without recourse to a continuous plinth. Is it mere accident that this requirement finds in the Apollo of the Mantinea basis so exact an echo? It is interesting that Amelung could cite no parallel for the

<sup>1</sup> Yet Amelung saw clearly the intimate connection between Fates and Muses since he wrote on p. 15 of his monograph: "Ja, man könnte den drei Parzen musische Attribute geben und dieselben auf die fehlende vierte Platte der Basis setzen, ohne daß sich irgendwie eine stilistische Dissonanz ergäbe." Strange that he did not realise that the Fates were already there among the Muses!

<sup>2</sup> "Das eigentümlich gekünstelte Verlegenheitsmotiv des erhobenen Himationzipfels ... ist doch nur aus einer gewissen Unfertigkeit des Künstlers zu erklären." Amelung, *Basis des Praxiteles*, p. 58.

statuary type, and contented himself with noting that the head was an echo of the austerer fifth-century tradition.

There are internal indications in support of our suspicion that the Mantinea basis is a mere pastiche of borrowed types. Amelung remarked with surprise that there seemed to be no formal principle of composition among the characters and that the "individual

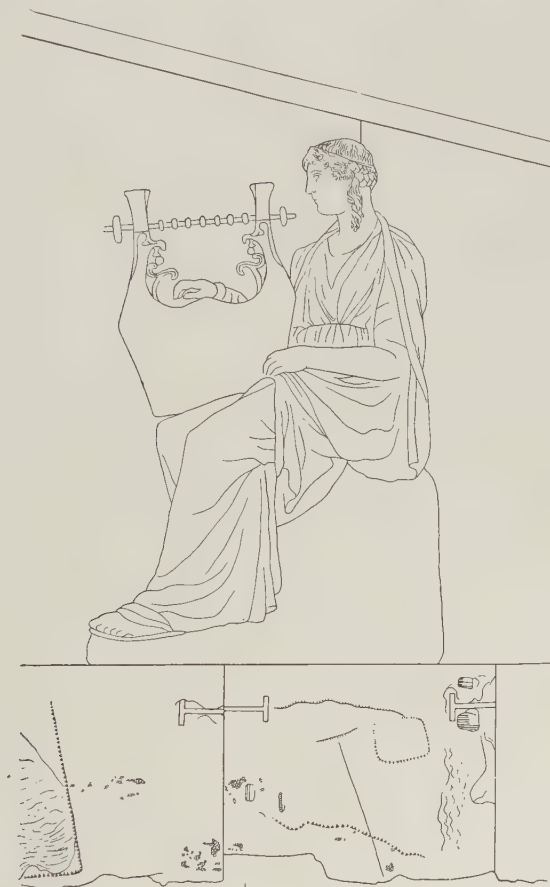


Fig. 25

figures stand like statues without any mutual relations to one another." He even complained of a peculiar awkwardness or carelessness in the composition ("*die eigentümliche Ungeschicklichkeit, besser vielleicht Sorglosigkeit, in der Komposition*"), attributing them to the youth and inexperience of their author, Praxiteles. But figures which were not created to go together are not apt to harmonise very brilliantly when thrown together on a panel. The pastiche always thus betrays itself by its internal incoherence.

Let us put ourselves in the position of the sculptors who concocted the Mantinea basis, deciding that they could meet the requirements of their theme by utilising the



Parthenon east pediment. Apollo Musagetes needs only the citharode's garment; Hephaistos becomes Marsyas by a brilliant stroke for which we no doubt congratulate ourselves heartily; the three Fates, by judicious repetition of one of their number, become four Muses. We still need two more Muses: what remains in the pediment to help us out? There is nothing left except the two running figures, Eileithyia and Athena (which are really much too active and agitated for our purpose) and the standing goddess next to Poseidon. *Faute de mieux*, we use her twice: the six Muses are there, the task is accomplished. Six Muses from only four available prototypes: that is why two of the figures on the Mantinea basis are repetitions. If the inference is right, we have discovered the type of the standing draped feminine figure on blocks 16-17, between Poseidon and Apollo.

A careful reader of Amelung's monograph will immediately raise an objection. On Dörpfeld's authority, Amelung concluded that there was a fourth and missing slab to the Mantinea basis with the remaining three of the nine Muses carved upon it. Our argument could scarcely survive a demand for three more Muses!

Dörpfeld's technical observations, which will be found on pp. 9-10 of Amelung's monograph, are of course authoritative, and their evidence cannot be set aside. But everyone must have wondered at the conclusion to which they led. A basis is reconstructed with two slabs to its face and one to each of its sides, thus necessitating a fourth carved slab, now missing. Such a basis, 2.70 m. long by 1.43 m. wide, is of adequate size and in correct proportion to carry the statuary group of Leto and her two children, Apollo and Artemis, described by Pausanias. That each of the ends of the basis should be clothed with a slab showing three Muses, is equally satisfactory and unobjectionable. But it is all but impossible that the two remaining plaques on the front of the pedestal should show on the left the three Muses needed to complete the canonic nine and on the right the internally symmetrical and isolated composition of Marsyas and Apollo, with the god turning his back on his attendant choir. The Scythian slave is a central axis on which Apollo and Marsyas are balanced. By all traditions of Greek art this plaque must either stand alone as an end slab or else become the centre of a group with a balancing slab on either side of it. It is scarcely just to complain that the maker of the Mantinea basis put his statues carelessly together without any sense for composition, and to refuse to allow him to make any use of the only properly composed unit which he managed to create.

There is a wholly different arrangement of the slabs which violates none of Dörpfeld's technical requirements, yet relegates the Marsyas slab to an end of the basis. If we combine the two slabs of the Muses so that the slightly broader blank strips of background come at the extreme left and right, and place this set of six Muses on the front of the basis, the Apollo-Marsyas slab may then become the short side at the left end of the pedestal, while a similar but missing slab must be assumed for the short side at the right (Fig. 24). If then we imagine Leto to have occupied the centre of the pedestal, with Apollo on her right (the spectator's left) and Artemis on her left, as happens on

the two reliefs from Thessaly which show this theme (Athens National Museum, 1380 and 1400), the Apollo slab will appear on the end below Apollo's statue, and we may accordingly imagine the missing slab at the other end to have shown some subject appropriate to Artemis. In that case there were never nine Muses, but only the six which we see to-day. And actually, there is not the least reason for insisting that the Muses must have been nine in number on a monument of the fourth century B.C. These are not the individualised persons of the Alexandrian canon, each with a specific function and attribute. Only if we could *name* the six who appear on the Mantinea basis, should we have the right to insist that there are three others still missing.

There are three possible minor objections to this rearrangement: (1) there is no obvious appropriateness in representing Muses on the front panel; (2) the overlapping of the slabs is not identical at front and rear of the basis; (3) the slab-joints occur in front instead of around the corners on the ends and are therefore needlessly prominent. None of these objections seems to me to weigh in the balance against the impossible composition in the traditional reconstruction. And each of the objections can be divested of much of its force by countering that (1) the Muses are no more appropriate to Leto wherever they may be put, since Apollo cannot in any case be the chief figure of the statuary group, and (2) and (3) there is no Greek architectural practice demanding that all the slabs be of equal length or that joints occur on the ends rather than the front of a base. In the new arrangement, not merely is the Marsyas slab a balanced, because isolated, composition; but Apollo now turns his back on the wall instead of on his own followers. And the Muses now group themselves into pairs to produce a semblance of rhythm and composition which they wholly lacked in the isolated slabs.

Actually there are three serious objections against the traditional arrangement proposed by Amelung:

(1) The dowels at the left of the slabs force us to assume that the basis stood free with four panelled sides and was not set against a blank wall, since in the latter case the dowel of the end slab against the wall could not have been set. The apparently telling argument on p. 10 of Amelung's monograph is thus voided, because the slabs with the Muses must have been evenly framed at left and right by the projecting end of the return slab around the corner and the greater stretch of free background at the left of one and at the right of the other slab is irrelevant, or rather, inexplicable. In the new restoration these terminal strips appear appropriately at left and right of the frieze of six figures.

(2) The two slabs with the Muses are not exact pendants, but are of unequal length, one being 0.028 m. shorter at the top than the other. This is a discrepancy of 2% of the length of the side and hence constitutes a real objection against making them balance each other in a rectangular basis. In the new restoration the relative lengths are irrelevant, since both slabs are combined in a single frieze.

(3) These same slabs are not cut true. Instead of forming exact rectangles they taper slightly and in opposite senses, one being 0.014 m. broader at the top than at the

bottom, while the other is 0.009 m. broader at the bottom than at the top. They are thus not fitted to form symmetrical ends to a pedestal; but if they are aligned together, as in the new restoration, the discrepancies, being in complementary senses, cancel one another within 5 millimetres, thus,—

	Slab (1)	(2)	(1) + (2)
measurement at top of slab .....	1.376 m.	+ 1.358 m.	= 2.734 m.
measurement at bottom of slab .....	1.362 m.	+ 1.367 m.	= 2.729 m.
discrepancy between top and bottom ....	0.014 m.	— 0.009 m.	= 0.005 m.

The resultant error, being less than two-tenths of 1% of the length of the side, is negligible. Thus combined, the mouldings of the two slabs align perfectly both at top and bottom<sup>1</sup> and agree in every detail; and the two slabs fit at the joint without gap or discrepancy of any kind.

In summary, there are no technical difficulties or esthetic considerations to be urged against the new arrangement, whereas there are very serious difficulties in the way of the traditional reconstruction.

The Mantinea basis has turned out to be nothing more nor less than an ingenious adaptation of the Parthenon east pediment, producing figures of great charm and much delicacy, but without compositional coherence or structural feeling. As early as the fourth century B.C. the great masterpieces had begun to assume the rôle of copy-book repertoire of available types and poses for less important commissions among the ateliers. Anyone who will look closely at the minor reliefs and even the vase-paintings of the period will be able to find innumerable parallels to confirm this verdict. It is thanks to these other instances that our seemingly hazardous conclusion that the fourth type of Muse on the Mantinea basis is copied from the "Hera" of the east pediment can be proved to be correct.

In the Hermitage there is a vase (Fig. 26) from Kertch in the Crimea, a pelike of Attic make from the opening years of the fourth century B.C., which in spite of the praise which it has occasionally received seems to be a deplorably bad work of art. Robert in his *Archäologische Märchen* (p. 180 ff., and Plate VI, from which Fig. 26 is reproduced) describes and interprets it without going into the typological origin of its figures further than to presume some fifth-century inspiration. But most of the figures are actually free-hand sketches from the central scene of the east pediment. There is Zeus on his throne (not very recognisable, perhaps) and Athena rushing away, and between them a Victory hovering in air; but the scene has been reversed and Athena issues from in front instead of from behind her father's throne. In the foreground sits a tympanon player upon a rocky seat. From her pose we may guess at once that her prototype was Klotho, especially as her left hand seems to be clenched as though around a distaff instead of properly grasping her tambourine! On the other side of Athena runs Hermes in a pose so ill suited to his action of lifting high a newborn

<sup>1</sup> If this seems not to be the case in Fig. 24, the discrepancy is due to photographic accidents.



infant that we must suspect contamination of some sort. The figures beyond Hermes have nothing of the Parthenon in their style and must have been drawn from some other source,—a discrepancy which marks also that other and more famous Kertch vase<sup>1</sup> which borrowed its main figures from the central scene of the other pediment of the Parthenon and completed them with unrelated figures from elsewhere. The two vases are excellent parallels and mutually confirm each other's authority. But on our pelike there remains a figure close beside the throne of Zeus, diademed and certainly intended for Hera; and this figure, as Amelung long ago recognised, is the type of our Muse on the Mantinea basis "*fast unverändert.*" Amelung, with his usual flair for types



Fig. 26. Pelike from Kertch

and derivations, also saw that the Hera on the pelike had been copied from some statuary prototype:—

“Die Figur steht merkwürdig ungeschickt im Bilde, so daß man leicht auf die Vermutung kommen kann, sie sei nicht von dem Maler erfunden, sondern nach einem plastischen Vorbild kopiert.”

Now, those who have studied the ancient representations of the birth of Athena in vase-painting have found that the gods most frequently present beside the indispensable Zeus, Athena, and Hephaistos are Hera, Ares, Poseidon, Apollo, and Artemis; and Petersen, for example, argued that Hera and Poseidon must certainly have been shown in the pediment. But torso H is presumably Poseidon and the draped goddess beside him should have been Hera. Twice, in totally different environment, we have been led to the same type for the missing statue. In one instance she was disguised as a Muse (like her other

<sup>1</sup> Originally published in the *Comptes-rendus de la commission impériale archéologique* for 1872. Well reproduced in *J.H.S.* 1882, p. 245, and frequently elsewhere.

companions from the pediment); but in the second instance she appeared in her true character of Hera.

Having found out who she is, we shall have no difficulty in greeting her again. The Hera of the Kertch vase recurs several times on Attic reliefs, always in the company of some other figure from the east pediment of the Parthenon.

A well-known basis from Epidauros, now in the Athens National Museum (Fig. 27), with reliefs which include a figure supposed to be one of the earliest datable examples



Fig. 27

of archaistic sculpture, shows a winged Victory at one angle, an accurate repetition of the Hera of the Kertch pelike in the centre, and a seated god who has been sometimes miscalled Asklepios in spite of the absence of the familiar snake beneath the throne. Svoronos correctly argued that he must be Zeus and that the goddess in front of him must therefore be Hera and not Hygieia. Since 1903, when the basis was published in the Brunn-Bruckmann series, the head of the god has been re-attached to the relief. Although the types of Zeus and Asklepios are not always distinguishable, the leonine hair and the aloof magnificence in the gaze of this exquisite miniature confirm Svoronos' identification. And since the elaborate details of the throne are precisely those on the Madrid puteal, except that the proportions have been made broad and low to suit the space,

and the pose, except for being reversed, as so frequently happens in copies and adaptations, exactly repeats that of the Zeus of the puteal, there can be no doubt that the figure derives directly from the Parthenon pediment. In that case, the head may claim to be a valuable document, since the Zeus on the puteal has no face and the Zeus of the Tegel relief is a lifeless and clumsy piece of work. And, of almost equal importance, our



Fig. 28

belief that the standing goddess is the Hera of the pediment is again confirmed. By the company she keeps, the Hera has once more told us who she is.

An Attic relief from Chalkidike, now in the Glyptothek in Copenhagen (Fig. 28) repeats two fifth-century types in very obvious disguises. At the right, the Athena is no true Athena at all, but a feeble masquerader in whose costume the clumsy aegis is the only alteration from the Hera type for which we have been searching. The pose is correctly shown and the drapery is exact even to the little crumpled mass gathered under the left elbow, a detail which the artist of the Mantinea basis carelessly reduced to an unintelligible boss or swelling. Beside Athena stands a male divinity, half-draped,



with right hand held aloft. The weight is on the left foot, the right arm is raised as though supporting itself on a grounded spear or staff which the copyist was constrained to omit save where the pose of the hand forced him to include it, and the left hand is braced on the buttock or loin. Though he may be intended for the mysterious Thracian Staphylos, he is clearly derived from an Attic prototype of Periclean times, and resembles Poseidon more than any other type. His occurrence here side by side with the Hera of the east pediment gives us the decisive clue. We have only to turn him into three-quarter profile toward our left to produce a figure precisely suited for the position next to Hera in the pediment. The god Staphylos is none other than the Poseidon of torso H, drawn more frontally in order to escape the difficult foreshortenings. Even the drapery may be virtually exact, if we imagine it hanging a little more loosely from the shoulder and a little lower around the waist. For torso H, although it appears entirely nude, is not derived from a naked figure. On the left shoulder-blade there is the broken remnant of attached drapery which must have hung directly down from the outstretched upper arm, just free of the torso. The Chalkidike relief is thus nothing but the laziest possible transformation of the group of Poseidon and Hera in the east pediment into Staphylos and Athena. Though much is gained by this discovery, not all the puzzles of the relief are thereby solved. In Lippold's illuminating text to the Brunn-Bruckmann publication (No. 680) the opinion of the great epigraphist Wilhelm is quoted in support of the genuineness of the curious and incomprehensible inscription beneath the figures. We have been able to bring a proof that the sculpture is equally authentic and ancient. For how could any modern imitator have guessed the secret of these figures? As to its date and immediate provenance, it is thoroughly characteristic of the fourth century B.C. Attic ateliers thus to adapt famous statues of the great masters to their petty commissions. The "Masterpieces of Greek Sculpture" have been sought in literary sources, in the testimony of Pliny, Lucian, and their ilk; but they may equally well be found in the vast repertoire of ancient minor reliefs, where the only difficulty seems to be the recognition of the identity of the original author in the plagiaristic version of his uninventive successor.

Such a collection of uninspired adaptations from great originals occurs on the little round altar with reliefs of the twelve gods, found north of the Theseum in 1877, published by von Sybel in the *Athenische Mitteilungen* for 1879, and now set up in the Athens National Museum opposite the Mantinea basis. Of the seven figures still preserved, three are here republished from a new photograph by Wagner (Fig. 29). The Zeus seems to be an unedifying rendering of the great central figure of the pediment. In that case, though the pose is reversed, as on the Epidauros basis, the legs are shown with the position of the feet interchanged,—an easy formula for creating an original theme without the trouble of inventing anything new. Behind Zeus stands the Hera of the east pediment. The himation rolled into a girdle with the gathered folds pressed under the elbow reflects faithfully the prototype which the Mantinea basis copies so perfunctorily. Only in the length to which the himation falls about the ankles is there any discrepancy with the established type. Beyond Hera sits Apollo in a peculiar

sprawling attitude with his left foot thrust far forward and his right drawn back to the rock on which he is throned. This is exactly the position which our analysis of the pediment floor demanded for the seated divinity next to Hera. We have already deduced that this figure was nude, and therefore male, and hence presumably Apollo; and since such a pose is very uncommon, the juxtaposition here on the altar with the Zeus and the Hera of the east pediment can scarcely fail to arouse our hopes. And



Fig. 29

actually, here in the Apollo of the altar relief *the left foot is far advanced and detached from the rest of the marble block, the right foot is drawn back against the throne, the drapery cast over the left thigh and brought around beneath the figure*,—all of which were distinctive requirements demanded by the floor-marks. We have but to turn the torso toward the figure's left instead of his right, to produce a statue so perfectly adapted to the vacant position in the pediment that we can hardly fail to believe that the inspiration for the Zeus and Hera on the altar of the twelve gods was likewise the source for the Apollo, and that all three were taken directly from the Parthenon. And if we compare the statues in the National Museum in Rome, one of which we used in Fig. 3 to show the



type of statue which would exactly suit the rather complicated technical demands of the pediment, we shall discover that their type is the same as that of the altar relief.

There is an unfortunately complicated minor problem which here arises. Did the master of the "*dodekatheon*" relief merely show the Apollo as though seen from the tympanon (and if so, how did he manage to visualise its appearance?), or did he apply the formula which we have derived from his version of the Zeus and reverse the pose as though in a mirror and then interchange the position of the feet? The statues in

Rome favor the first alternative, since the pose on the altar is an actual aspect of these statues. If the second explanation were correct, the original in the pediment would have held the lyre with the right hand away from the spectator and the left would have been lowered, thus making the whole figure more appropriate for its position in the right wing of the pediment if it was to face toward the centre.

Perhaps a decision can be reached by consulting another relief in the Athens National Museum (Fig. 30) found in Thebes but generally pronounced to be genuine Attic work. It is incomplete; but what remains seems to be a direct adaptation from the pediment group of the standing Hera in front of the seated Apollo. Presumably the woman is not here intended to be Hera; for Apollo beside her is disguised as Dionysos with thyrsos, nebris, and boots, though he still keeps his long curls. The left foot is thrust well forward, while the right is drawn back and propped upon a projecting ledge of



Fig. 30

the rock which serves as throne. The figure faces correctly for the pediment, with head in profile and torso turned broadly into three-quarter view. If we substitute a lyre for the thyrsos and put a plectrum or a fold of drapery in the idle hand, we have but to correct the slight exaggeration in the right foot (which seems a trifle too high and a trifle too far forward) to produce once more the Apollo of the pediment,—but this time with the arms reversed in agreement with the second of the two alternatives proposed in the preceding paragraph. And if, profiting by an observation of Loewy, who in publishing this relief among the *Einzel aufgenommen* (No. 1248) remarked that the head of the Dionysos with its straight stiff locks recalled the type of the Apollo on the Mantinea basis, we turn back to our previous suggestion that this latter Apollo was



nothing else than a direct copy from the Apollo of the pediment, produced by reversing the type and adding the citharode drapery of the Musagetes, we shall see that this reversal of the Mantinea basis Apollo (Fig. 25) yields the same variant as the Dionysos relief. Incidentally, this is a final indication that the Mantinea basis is the Parthenon pastiche which we suspected; but our present interest lies in the question, Shall we prefer the authority of the two statues in Rome with the lyre on the left or of the Dionysos relief and the Mantinea basis which favor an opposite arrangement? As we have seen, the Apollo of the *dodekatheon* altar relief will not decide the issue, because we cannot be certain of the method which the sculptor employed to produce the pose. Which then is stronger,—the authority of two actual statues or an inference from a series of reliefs with the exigencies of pedimental composition to support them? Unfortunately there seems to be no material for a conclusive decision, even though for Mr. Peschke's restoration of the pediment a preference was inescapable. The analogy of Klotho leads one to believe that the torso should be turned toward and not away from the spectator and that the arm toward the tympanon should be raised. The fact that both the Dionysos relief and the statues in Rome agree in showing the right thigh raised and the right foot supported on a ledge of the rock above the floor level incline one to attribute this device of the pose to the presence of the lyre on this side of the body, the extended left foot being a reflex as natural to this position as the crossed feet of Klotho were to hers. The two statues in Rome are only in small part ancient, having been pitilessly completed, patched, and restored; and it is possible that their authority is not so great as at first appears.

Behind Apollo there remains a single unfilled space to complete the lacuna in the pediment; and this, as we have seen, should be a figure running or moving rapidly toward the right, presumably a Hermes. I can find no certain echo of such a figure. On the Kertch pelike (Fig. 26) there is a running Hermes who stoops to lift the newborn Erichthonios. Considering the company he keeps—Zeus, Athena, Nike, Hera, Klotho, all from the east pediment—this should be the missing figure. Reversed and enlarged, he fits the remaining gap in the pediment; but the artistic effect is so deplorable that either he never was the Hermes of the pediment at all or he has been so altered and adapted by the vase-painter as to be no longer recognisable. A comparable running Hermes recurs on a stater of Pheneus dating from the second quarter of the fourth century and echoing Pheidias canons and drapery quite as much as the Praxitelean manner which it has been fashionable to discern in this coin. But there is no clue here to lead us back to the Parthenon. Possibly, the *pendant* to "Eileithyia" was not a Hermes after all, but another draped feminine statue, intended perhaps for Iris; but this suggestion is difficult to reconcile with the restriction of space, which seems to demand a more lightly draped figure. In any case I have no plausible suggestion to make. The last of the eleven of our great company remains in hiding: the hunt is over.

## VII.

It is high time to stop and review the result. The three Fates must be accepted for certain, since actual fragments of two of them still exist. Hephaistos, Zeus, Nike, and Athena are scarcely less sure, since it is inadmissible as mere coincidence that such a series of figures, illustrating in good Pheidian style the legend known to have occupied this pediment and exactly adapted to every requirement of size, pose, and position demanded by the technical evidence of the pediment floor, should have appeared on the Madrid puteal in correct sequence with the Fates and yet have been derived from some other wholly unrelated source. The torso of Poseidon is an incontrovertible document: its completion and restoration to accord with the "Staphylos" of the Chalkidike relief is reasonable, since the pose with trident in raised right hand, left hand on thigh, weight on left foot is attested partly by the torso itself and partly by the pediment floor-block. The Hera recurs so frequently and always in pedimental company—on the Mantinea basis with the Fates, on the Kertch pelike with Zeus, Athena, and Klotho, on the Epidauros basis with the Zeus, on the Chalkidike relief with the Poseidon, on the altar of the twelve gods and on the Dionysos relief from Thebes with the Apollo—that the type, including pose and drapery arrangement, is firmly established and the provenance abundantly evident. The Apollo is a glimmer through the darkness, too luminous to be mere *ignis fatuus*. The Hermes cannot be identified at all.

Thus all but one of the missing statues of the pediment can be made to group themselves to fill the gap in Carrey's drawing of 1674 and tempt the modern draughtsman to the hazardous enterprise of picturing that which the citizens of Periclean Athens once beheld. I have succeeded in persuading my good friend Vinko von Peschke to try his hand at this perilous task. Both he and I, who have spent many days in collaboration, have come to realise that the obstacles are too great to make perfect success possible. Yet we offer no excuses for the result, which Plate II reproduces. Some of the faults will be due to the draughtsman and some of the mistakes to the archaeologist. Some day someone else will do better than we. But at least there is something here, where before there was either almost nothing or, worse, a presumption quite false and unfounded. In lieu of apologies—and some are no doubt in place—a running commentary to the present drawing may serve the more useful purpose of calling attention to minor points which have not been discussed in the preceding pages but which must be settled before any picture can be drawn.

The slope of the pediment is taken at 6:25. The resulting height of the central apex agrees with Penrose's calculation in his *Principles of Athenian Architecture*. Of the two lines which mark the cornice, the lower represents the cornice height at the front, the upper that at the back on the tympanon. The reason for the difference of 0.10 m. between these two lines will be clear to anyone who looks at the profile of the raking cornice blocks in any publication of the Parthenon. Theoretically it would be possible

for a statue to reach higher than the front cornice line into the hollow of the soffit; but we have avoided such an assumption except for the running figure G (for which the scooped bed attests a conflict with the roof overhead) and Selene and the heads of horses whose exact position seems indisputable. The pediment floor-blocks have been drawn with the help of a remarkable series of photographs taken vertically from above by Hermann Wagner for the architect in charge of the architectural restoration of the Parthenon, M. Nicholas Balanos. I am extremely indebted to M. Balanos' unfailing and quite exceptional kindness in permitting me to possess this series of photographs before their publication and in allowing to M. Fomine and myself access to the pediment floor on any and every occasion, as well as in permitting the publication of so much material out of his own domain. The measurements for blocks 8 to 20 have been controlled by a steel tape; those in the less accessible wings of the pediment have been largely reproduced from Sauer's extremely reliable and careful publication in the *Antike Denkmäler*. Where the utmost attainable accuracy would have any bearing upon the restoration, as in blocks 8-9 and 17-18, the drawing should be supplemented by M. Fomine's special surveys in Figs. 2 and 5.

Klotho has been drawn from the Tegel relief. It is possible that the left hand should be turned further around toward the spectator and brought across the body so as to be held more nearly above the right hand with the spindle. The whole torso has been flattened into the background plane by the artist of the relief in order to avoid the difficulties of foreshortening. But a correction of this behaviour of the copyist seemed to us too hazardous to attempt in our restoration. In consequence a certain plastic depth such as may be discerned in the Demeter and Persephone and the "Three Sisters," drawn from the original statues, is lacking in all the figures derived at second-hand from reliefs.

For the Hephaistos a long narrow plinth and a tree-trunk as support for the heavy free end of drapery have been adapted from a plinth in the British Museum with exactly comparable indications of a striding figure. As this plinth has been attributed to H of the west pediment, it seemed reasonably good authority for solving an otherwise difficult technical problem.

The Zeus is an exact reproduction from the Madrid puteal, except that the details of the throne have been interpreted in terms of other known examples of ancient furniture in an attempt to understand the sense of these complications. The relative scale of the Victory has been reduced much less than might be at first imagined. The difference in effect is due to the change in composition resulting from the gap which the copyist created by drawing Athena out from behind the footstool.

The next three figures have been entered in dotted outlines because they are not derived from a single and certain prototype such as the Madrid puteal but put together from the combined evidence of various versions, all of which agree in general type yet are discrepant in some of their details. The Poseidon is the least satisfactory and is far from certain in many minor respects, since the problem of combining the extant torso (H) with the frontal and mediocre drawing of the Copenhagen relief is beset with difficulties. Owing to M. Peschke's absence, I was forced to venture my own hand on



this figure and drew a simple profile without drapery. The result must therefore not be taken too literally. The Hera is a composite of all the five recurrences of the type, none of which have quite the variety and sharpness of a Parthenon original. This is perhaps the place to mention a possibility which is too uncertain for incorporation in the main argument. A terribly battered head, shown in profile toward the left in Fig. 31, exists among the Parthenon fragments of the Acropolis Museum.<sup>1</sup> The peculiar cutting

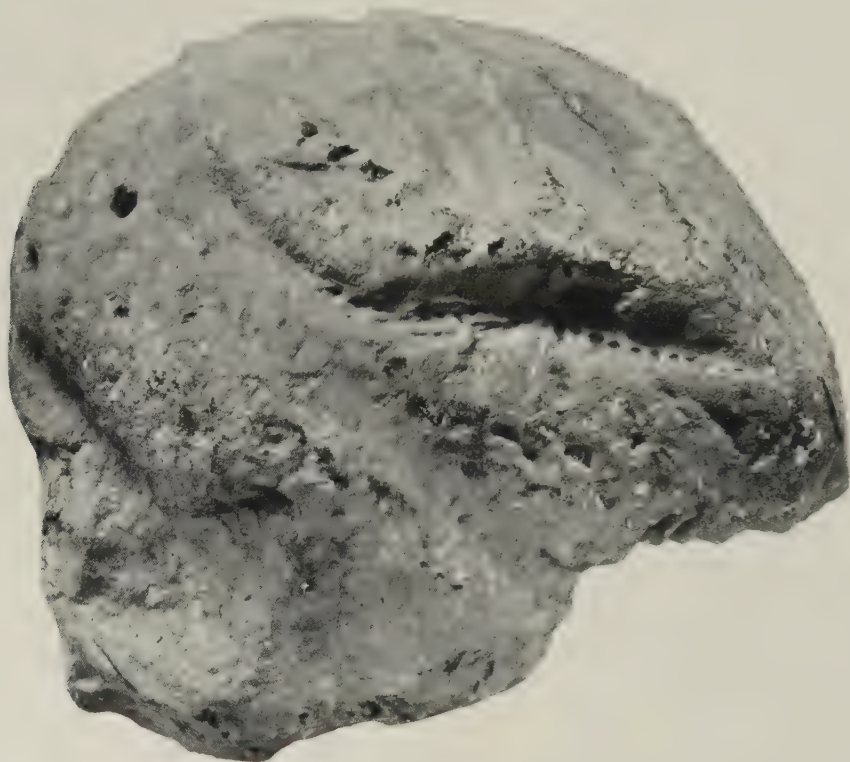


Fig. 31. Head of Hera from the Parthenon East Pediment (?)

suggests the attachment of a thin separate piece, clearly the veil. The size where measurable is a trifle less than that of the Laborde head. This fragment should therefore be the original Hera. The Apollo on Plate II purports to be the Terme statues from the Ludovisi collection, restored and corrected in the light of the other recurrences of the type on Attic reliefs. I have not ventured to make even a suggestion for the running Hermes;<sup>2</sup> for though almost any version in proper pose and tradition would be better than a blank space and vastly improve the general understanding of the pediment composition as a whole, the penalty of such an imaginary creation would inevitably be

<sup>1</sup> Acrop. Mus. 935. *J.H.S.* 1911, p. 67, Fig. 2 gives a different aspect of the head.

<sup>2</sup> Yet I could not refrain from the experiment of introducing two versions of such a figure among the silhouettes of Figs. 4 and 6.

a reflected distrust on the other figures, which are not meant to suggest how the east pediment *might* have looked, but aim at the much more presumptuous ideal of trying to reproduce the actual statues as they were.

If we survey the result in its more general aspects, the complete formal balance between the two halves of the composition may be a matter for comment and surprise to those who are familiar with the freedom and variety which seem to characterise the other pediment of the temple. Yet actually the west pediment is also very strictly balanced in the central group and almost equally so in the wings, employing a more irregular balance only for two roughly equivalent groups of three figures in either half. Its composition may be schematised in columnar form as follows:

## WEST PEDIMENT OF THE PARTHENON

Left:	Axis:	Right:	Type of Composition:
Athena	Olive-tree	Poseidon	Exact Balance
Horses		Horses	
Attendant		Attendant	
Charioteer		Charioteer	
{ Aglauros <sup>1</sup>		Oreithya	Equi- valent Groups
{ Erysichthon		{ Kephalos	
Herse		{ Prokris	
{ Pandrosos		{ Philomela	Formal Counterparts
{ Kekrops		{ Prokne	
Eridanos		Ilissos	
Kephisos		Kallirhoe	

The tiny children with Oreithya and Prokne are supernumeraries, which only seem to disturb a balance actually very calculated and far-reaching.

An equivalent analysis of the other pediment would read as follows:

## EAST PEDIMENT OF THE PARTHENON

Left:	Axis:	Right:	Type of Composition:
Hephaistos	Zeus	Athena	Formal Counterparts
Aisa		Poseidon	
Lachesis		Hera	
Klotho		Apollo	Exact Balance
Eileithya		Hermes	
{ Demeter		" Artemis "	Equivalent Groups
{ Persephone		{ " Peitho "	
Dionysos		{ " Aphrodite "	
{ Horses		{ Selene	
{ Helios		{ Horses	

<sup>1</sup> For the names, which are more or less arbitrary, cf. *Hesperia*, I, 28-29.

It is further true, and obvious, that the compositional lines are simpler in the east pediment because the figures are isolated and do not touch except in the extreme wings nor overlap except in the case of Zeus and Athena, whereas in the west pediment all the figures touch (in the visual plane, at least) and nearly all overlap. There is an exact precedent for this in the Zeus temple at Olympia, where the same distinction is maintained between the isolated, vertical, and quiet figures of the east pediment and the complicated, interlocking, agitated groups of the west. In both temples the distinction very probably hinges on a difference of emphasis between entrance façade and rear of the building.

The long discussions devoted to finding suitable names for the various statues, which have occupied so much space in the literature of the Elgin Marbles, were badly handicapped by the impossibility of including the missing figures with the extant ones. It is now clear that current archaeological opinion is justified in veering away from the symbolic interpretation which saw personified mountains, sea, and land in these statues. I imagine that this school of thought is at present not strongly represented and that most scholars are content to follow Petersen's brilliant pleading in his *Kunst des Pheidias* and see Dionysos in the figure reclining on the panther skin and Persephone and Demeter in the two goddesses seated upon the blanket-covered chests. Since the central lacuna has been filled with the three Fates and, besides these, with characters which seem to be the great Olympians,—Hephaistos, Zeus, Athena, Poseidon, Hera, Apollo, and presumably Hermes,—the probability that the famous "Three Sisters" are minor mythological characters or outsiders is very greatly reduced. The Fates belong by proper right at a birth scene; but the claims of the Hours or the Graces are more remote, especially as some of the chief divinities are still missing from the assembled company. In his *Kunst des Pheidias* (pp. 128–143) Petersen argued (for me, convincingly) that the reclining figure must be Aphrodite and showed good cause for associating Peitho with her. The remaining figure of the triad must then be chosen from the following list:

Amphitrite,  
Artemis,  
Charis (who occurs on the base of the throne of Zeus at Olympia),  
Hestia (who is paired with Hermes on this same base).

If we agree that the figure is ill characterised as Artemis and inappropriately located to be Poseidon's consort, we shall have to agree with Petersen's preference for Hestia, who has apparently very good right to appear among the great Olympians. Or if we are completely persuaded that the "sisters" are an indivisible trinity, we shall have to favor the identification of Charis, to fit Peitho; but the analogy of the corresponding portion of the other wing, where an intimate pair (Demeter and Persephone) is associated with an unrelated third (Dionysos), indicates rather that a formal balance is intended, which differs only in that it brackets the middle figure of the triad otherwise.



Yet, before we finally give our suffrage for Hestia, if we review the divinities whom we have found attendant on the scene we shall miss Ares and Artemis. Both should be present. Ares' failure to appear might perhaps be condoned as due to a desire to emphasise the panoplied Athena as the true and sole war-god of the Athenians. But Artemis' absence is so puzzling that I am tempted to believe that she must be included by some stretch of argument, however fanciful. There are, however, only three possibilities:

(1) The running figure behind Apollo is his sister, Artemis, and not Hermes. In that case we must explain the absence of Hermes; and the suggestion that he is not visible because he has already sped abroad from Olympus with his tidings is surely very lame. Nor is the fleeing sister behind her brother's back a very appealing composition for the twins who are so closely paired elsewhere in ancient art. And a draped feminine figure is much more difficult to fit into the available space, which seems to have been taken less generously than for G precisely because the figure was male without heavily billowing drapery.

(2) The running figure in the other wing (G) is not Eileithyia, or Iris, but Artemis. I am not sure that this is an altogether foolish suggestion. We have all been nurtured in the belief that G is a bearer of tidings speeding away; yet she is not leaving Olympus so much as passing beyond the group of the Fates to join Demeter and Persephone. She resumes the movement begun with Hephaistos but interrupted by the impassive Norns, very much as the lost Hermes must be imagined to restore the movement in the other direction, begun by Athena but interrupted by the stationary Poseidon and Hera and the seated Apollo. G is characterised as a very youthful girl and wears a Doric chiton, which is not the huntress' garb yet is appropriate to Artemis when among the other gods. The Eileithyia of the older vase-paintings has in this case been omitted; and I admit to considerable regret to see the amusing company of surgeon, mid-wife, and god-mothers diminished by one of its most essential characters. For this reason it seems preferable to hold that

(3) the seated "Hestia" (K) is actually Artemis. In the frieze, below this very pediment, Artemis similarly appears between Apollo and Aphrodite and is more intimately associated with the latter than with her own twin brother. Also, on the frieze she is not specifically characterised as a young maiden but with bodily forms as mature and developed as in the statue K. Petersen's objection that this is not the active and verginal huntress of the hill-tops would be equally applicable to the quiet and lovely seated figure of the frieze, who seemingly can only be Artemis.

Except for this hesitation in the identification of a single figure, the interpretation of the pediment is clear and straightforward and shows nothing abstruse or intricate. Without scenic indication or further setting than the rising Sun and setting Moon, there is shown an assembly of the high gods, with whom the birth-fates are associated for the demands of an unusual occasion.

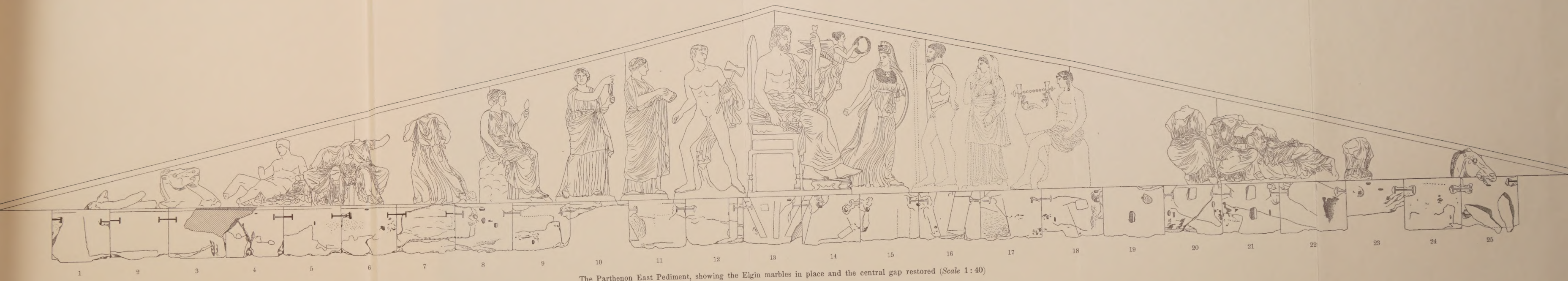
I should interpret the whole pediment, if I may be a little more communicative than the laconic Pausanias, somewhat as follows:

Next to the cosmic deities of the rising Sun and the setting Moon at the extreme left and right, recline the deities of mirth and happiness, wine and love, Dionysos and Aphrodite; and these, as the least concerned in the scene and the least in harmony with its sentiment, must occupy the outermost posts on either side. Then, at the left, the goddesses of the mysteries of death and the after-life stretch out their arms toward the completed mystery of birth—to Eileithyia who is departing, to the active Moirai who with spinning of the life-thread, drawing of the gifts of chance, and closing of the oracle of fate, mark that life has begun, and so to Hephaistos whose task is over, but who as an Olympian may linger if he choose. Thus the centre of the pediment is reached. And here in succession come the chief gods,—Zeus, himself the centre of interest for the legend and master of all the company, set on the very axis of the composition; Athena, whom Nike still connects most closely to her father; Poseidon, the second greatest of the gods, who will continue near and intimate with the newborn goddess in the ritual and in the greatness of Athens; Hera, who has been displaced as queen of heaven, but has taken the nearest available post; and last, the minor gods of Athens,—Apollo, Hermes, and Artemis, who may not be omitted.

In utmost simplicity of balanced composition, a theme of utmost simplicity of idea has been expressed in unequalled magnificence of sculptural execution. The real and insoluble mystery of the east pediment lies in its art, not in its archaeology.

RHYS CARPENTER





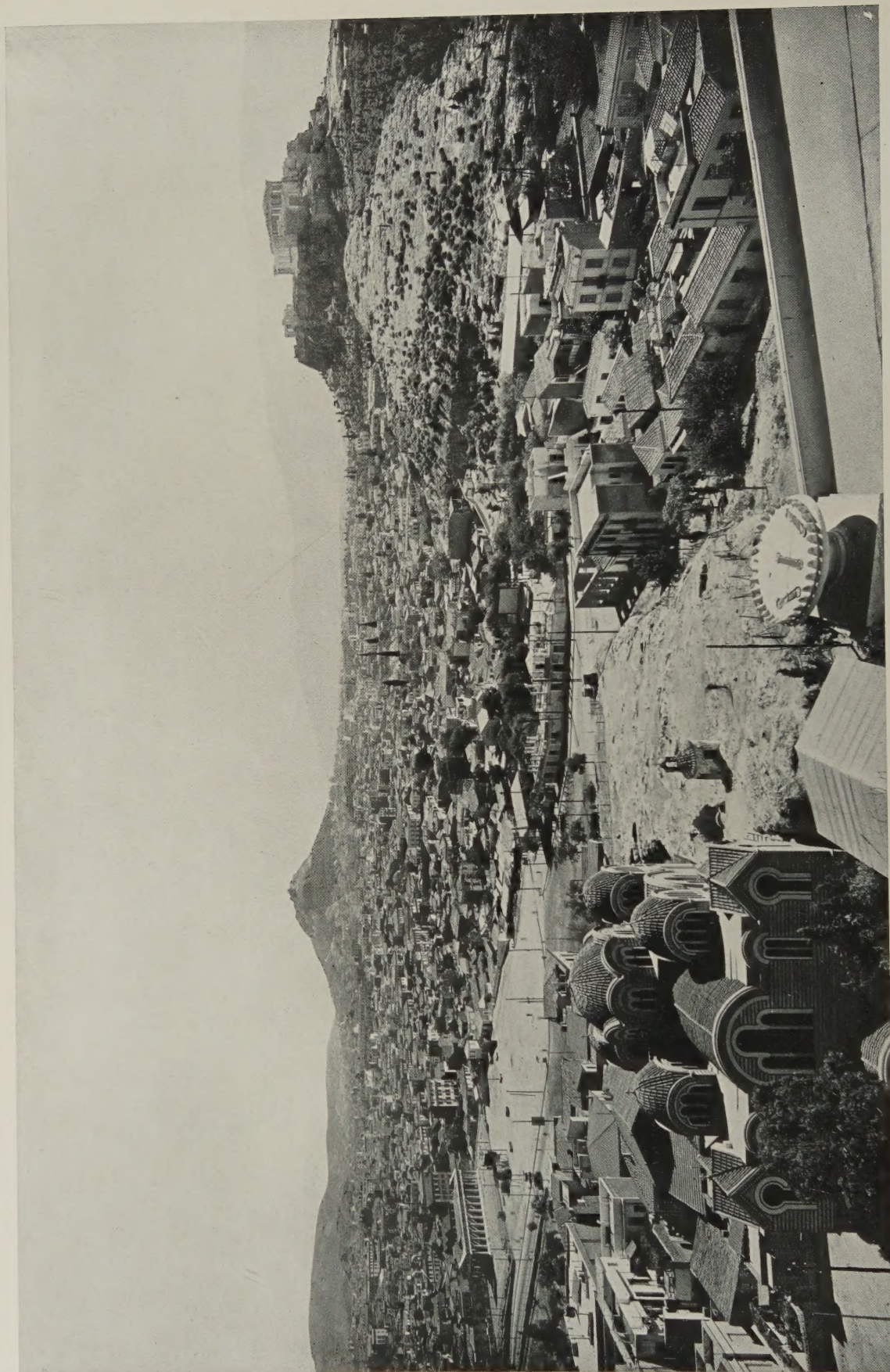
The Parthenon East Pediment, showing the Elgin marbles in place and the central gap restored (*Scale 1:40*)











The Agora as seen from the Observatory